printed,

AR074439 Sequence AR081119 Sequence AR085316 Sequence AR085316 Sequence AR088064 Sequence

Description

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Unknown.
Unclassified.

(Chases I to 1522)

Zavada J. Pastorekova, S. and Pastorek, J.
Method of inhibiting tumor growth using antibodies to Method of 1955075-A I 21-SEP-1999;

Location/Qualifiers
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Minimum DB : Maximum DB :

Title: Perfect score:

Scoring table: Sequence: Run

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Best Local Similarity 100.0%;
Matches 1522; Conservative 0;
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1 (bases 1 to 1522)

1 (bases 1 to 1522)

2avada, J., Pastorekova, S. and Pastorek, J.
MN proteins, polypeptides, fusion proteins
Patent: US 5972353-A 1 26-0CT-1999;
Location/Qualifiers
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               CCTGCTCCAGGCCTCACTGTGCAACTGCTGCTGTCACTGCTGCTGCTGTCCAT
                                            ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCC
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Pred. No. 3.4e-311;
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E Zavada, J., Pastorekova, S. and Pastorek, J.

MN-specific antibodies and hybridomas

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Location/Qualifiers

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Zavada, J., Pastorekcova, S. and Pastorek, J.
Detection and quantitation of MN-specific
Patent: US 60935.8-A 1 25-UUL-2000;
Location/Qualifiers
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GCCTTTCTGGAGGAGGGCCCGGAAGAAAACAGTGCCTATGAGCAGTTGCCTGTCTCGCTTG
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                                TCGGAGCACACTGTGGAAGGCCACCGTTTCCCTGCCGAGATCCACGTGGTTCACCTCAGC
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Pred. No. 3.4e-311;
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y Match Local Simila: hes 1522; Coo 1 ACAGTO 1 ACAGTO 1 ACAGTO	source	AUTHORS Zavada,J., Pastorekova,S. and Pastorek,J. TITLE MN gene and protein JOURNAL Patent: US 6204370-A 1 20-MAR-2001; FEATURES FEATURES	1 Unk	N Sequence 1 from patent US 6204370. 1 AR143487 AR143487.1 GI:15104773	AR143487	OY 1501 TTTTAAAATAATATTTATAAT 1522	OY 1441 GGAGCCGGTAACTGTCCTGTCCTGCTCATTATGCCACTTCCTTTTAACTGCCAAGAAATT 1500	QY 1381 ACTGGAGCCTAGAGGCTGGATCTTGGAGAATGTGAGAAGCCAGCC	Qy 1321 AGGCAGCACAGAAGGGGAACCAAAGGGGGTGTGAGCTACCGCCCAGCAGAGGTAGCCGAG 1380	Qy 1261 GCCCTGGTTTTTGGCCTCCTTTTTGCTGTCAGCGTCCCGTTCCTTGTGCAGATGAGA 1320	Qy 1201 AGTCCTCGGGCTGAGCCAGTCCAGCTGAATTCCTGGCTGG	QY 1141 GCGACGCAGCCTTTGAATGGGCGAGTGATTGAGGCCTCCTTCCCTGGAGTGGACAGC 1200	QY 1081 CACACCCTCTCTGACACCCTGTGGGGACCTTCTGGCTACAGCTGAACTTCCGA 1140	QY 1021 GCCCAGGGTGTCATCTGGACTGTGTTTAACCAGACAGTGATGCTGAGTGCTAAGCAGCTC 1080	QY 961 CTGCCCTCTGACTTCAGCCGCTACTTCCAATATGAGGGGTCTCTGACTACACCGCCCTGT 1020	OY 901 GAAGAAATCGCTGAGGAAGGCTCAGAGACTCAGGTCCCAGGACTGGACATATCTGCACTC 960
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1021 GCCCAGGGTGTCATCTGGACTGTGTTTAACCAGACAGTGATGCTGAGTGCTAAGCAGCTC 1080	961 CTGCCCTCTGACTTCAGCCGCTACTTCCAATATGAGGGGTCTCTGACTACACCGCCCTGT 1020	901 GAAGAAATCGCTGAGGAAGGCTCAGAGACTCAGGTCCCAGGACTGGACATATCTGCACTC 960 	841 GCCTTTCTGGAGGAGGGCCCGGAAGAAACAGTGCCTATGAGCAGTTGCTGTCTCGCTTG 900	781 ACCGCCTTTGCCAGAGTTGACGAGGCCTTGGGGGCGCCGGGAGGCCTGGCCGTGTTGGCC 840	721 TCGGAGCACACTGTGGAAGGCCACCGTTTCCCCTGCCGAGGATCCACGTGGTTCACCTCAGC 780	661 GGGCGGAGTACCGGGCTCTGCAGCTGCATCTGCACTGGGGGGGCTGCAGGTCGTCCGGGC 720	601 AACAATGGCCACAGTGTGCAACTGACCCTGCCTGCGCTAGAGATGGCTCTGGGTCCC 660	541 CTGCGCCCCTGGAACTCCTGGGCTTCCAGCTCCCGCCGCTCCCAGAACTGCGCCTGCGC 600	481 GCGGGCCGCTTCCAGTCCCCGGTGGATATCCGCCCCCAGCTCGCCCCCTTCTGCCCCGGCC 540	421 GACCAGAGTCATTGGCGCTATGGAGGCGACCCGCCCTGGCCCCGGGTGTCCCCAGCCTGC 480	361 GAGGOTCCTGGAGATCCTCAAGAACCCCAGAATAATGCCCACAGGGACAAAGAAGGGGAT 420 	301 GAAGTTAAGCCTAAATCAGAAGAAGAGGGCTCCCTGAAGTTAGAGGATCTACCTAC	241 CCACCCGGAGAGGATCTACCTGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCT 300	181 GATGACCCACTGGGCGAGGAGGATCTGCCCAGTGAAGAGGAGTTCACCCAGAGAGAG	121 CCCCAGAGGTTGCCCCGGATGCAGGAGGATTCCCCCTTGGGAGGAGGCTCTTCTGGGGAA 180	61 CCTGCTCCAGGCCTCACTGTGCAACTGCTGCTGTCACTGCTGCTTCTGATGCCTGTCCAT 120

Db 1 ACAGTCAGCCGATGGCTCCCCGGAGGCCCCAGCCCCTGGCTCCCCTTGGCTCCCCCGGCCCCGGCCCCGGCCCCGGCCCCGGCCCCGGCCCC	/mol_type="unassigned_DNA" Query_Match	Unknown. Unknown. Unknown. Unclassified. 1 (bases 1 to 1522) 1 (bases 1 to 2012) 2avada, J., Pastorekova, S. and Past MN gene and protein MN gene and protein Patent: US 6297041-A 1 02-0CT-2001 Location/Qualifiers 1 1522 //rolltrace/mnoknown/	RESULT 7 ARI71392 AR171392 AR171392 DEFINITION Sequence 1 from patent US 6297041. ACCESSION AR171392 VERSION AR171392.1 GI:17910342	QY 1501 TTTTAAAATAATATTTATAAT 1522	Qy 1441 GGAGCCGGTAACTGTCCTGTCCTGCTCATTATGCCACTTCCTTTTAACTGCCAAGAAATT 1500	Qy 1381 ACTGGAGCCTAGAGGCTGGATCTTGGAGAATGTGAGAAGCCAGCC	Qy 1321 AGGCAGGACAGAAAGGGGAAACCAAAAGGGGGTGTGAGCTACCGCCCAGCAGAGGTAGCCGAG 1380	Qy 1261 GCCCTGGTTTTTGGCCTCCTTTTTGCTGTAGAGCGTCGCGTTCCTTGTGCAGATGAGA 1320	Qy 1201 AGTCCTCGGGCTGCTGAGCCAGTCCAGCTGAATTCCTGCCTG	QY 1141 GCGACGCAGCCTTTGAATGGGCGAGTGATTGAGGCCTTCCCTGCTGGAGTGGACAGC 1200
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QY 481 GCGGGCCGCTTCCAGTCCCCGGTGGATATCCGCCCCAGCTCGCCCCTTCTGCCCGGCC 540	QY 421 GACCAGAGTCATTGGCGCTATGGAGGACCCCGCCCTGGCCCCGGGTGTCCCCAGCCTGC 480	361 GAGGCTGCTGGAGATCCTCAAGAACCCCCAGAATAATGCCCCACACAGGGACAAAGAAGGGGAT 42	301 GAAGTTAAGCCTAAATCAGAAGAAGAGGGCTCCCTGAAGTTAGAGGATCTACCTAC	QY 241 CCACCCGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCT 300	Qy 181 GATGACCCACTGGGCGAGGAGGATCTGCCCAGTGAAGAGGATTCACCCAGAGAGGAGGAGGAT 240	121 CCCCAGAGGTTGCCCCGGATGCAGGAGGATTCCCCCTTGGGAAGGAGGCTCTTCTGGGGAA 1		CAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCC 60	Query Match 100.0%; Score 1522; DB 6; Length 1522; Best Local Similarity 100.0%; Pred. No. 3.4e-311; Matches 1522; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	source	AUTHORS ZAV TITLE MN JOURNAL Pat	Unknov Unknov Unclas	N Sequence 1 from patent US 6297051. N AR171563 AR171563.1 GI:17910513	AR171563 1522 b	QY 1501 TTTTAAAATAATATTTATAAT 1522 	QY 1441 GGAGCCGGTAACTGTCCTGTCCTGCTCATTATGCCACTTCCTTTTAACTGCCAAGAAATT 1500	
RESULT 9 BD243152 LOCUS BD243152 DEFINITION MN gene and protein. ACCESSION BD243152	QY 1501 TTTTAAAATAATATTTATAAT 1522	QY 1441 GGAGCCGGTAACTGTCCTGTCCTGCTCATTATGCCACTTCCTTTTAACTGCCAAGAAATT 1500	Qy 1381 ACTGGAGCCTAGAGGCTGGATCTTGGAGAATGTGAGAAGCCAGCC	Qy 1321 AGGCACCACAGAACGGGAACCAAAAGGGGGTGTGACCTACCGCCCAGCAACGTACCCGAG 1380	1261 GCCCTGGTTTTTGGCCTCCTTTTTGCTGTCACCAGCGTCGCGTTCCTTGTGCAGATGAGA	1201 AGTCCTCGGGCTGCTGAGCCAGTCCAGCTGAATTCCTGCCTG	41 GCGACGCAGCCTTTGAATGGGCGAGTGATTGAGGCCTCCTTCCCTGCTGGAGTGGACAGC	Qy 1081 CACACCCTCTGACACCCTGTGGGGACCTGGTGACTCTGGGTACAGTTGACATTCCGA 1140	21	Qy 961 CTGCCCTCTGACTTCAGCCGCTACTTCCAATATGAGGGGTCTCTGACTACACCGCCCTGT 1020	Qy 901 GAAGAAATCGCTGAGGAAGGCTCAGAGACTCAGGTCCCAGGACATATCTGCACTC 960	Qy 841 GCCTTTCTGGAGGAGGGCCCGGAAGAAACAGTGCCTATGAGCAGTTGCTGTCTCGCTTG 900	Qy 781 ACCGCCTTTGCCAGAGTTGACGAGGCCTTGGGGCGCCCGGGAGGCCTGGCCGTGTTGGCC 840	Qy 721 TGGGAGCACACTGTGGAAGGCCACCGTTTCCCTGGCGAGATCCACGTGGTTCACCTCAGC 780	Qy 661 GGGCGGGAGTACCGGGCTCTGCAGCTGCACTGGAGGGGCTGCAGGTCGTCCGGGC 720	Qy 601 AACAATGGCCACAGTGTGCAACTGACCCTGCCTCGGGCTAGAGATGGCTCTGGGGTCCC 660	Db 541 CTGCGCCCCTGGAACTCCTGGGCTTCCAGCTCCCGCGCTCCCAGAACTGCGCCTGCGC 600

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Mammalia; Eutheria; Frimates; Catarrhini; Hominidae; Homo.

15 1 (bases 1 to 1522)

18 Zavada, J., Pastorekova, S. and Pastorek, J.

MN gene and protein

11 Patent: JP 2002528085-A 1 03-SEP-2002;

11 NSTITUTE OF VIROLOGY

12 Homo sapiens (human)

PN JP 2002528085-A/1

PD 03-SEP-2002

PF 23-OCT-1998 US 09/17776, 23-OCT-1998 US 09/178115 PI

17 JAN ZAVADA, SILVIA PASTOREKOVA, JAROMIR PASTOREK PC

18 C1201/02,G01N33/566//(C1201/02,C12R1:91),C12N15/00,A61R39/00,

PC C1201/02,G01N33/566//(C1201/02,C12R1:91),C12N15/00,A61R37/02

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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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RESULT 11 AX332607 LOCUS DEFINITION ACCESSION AX332607.1 GI:18123241 KEYWORDS SOURCE Homo sapiens (human) ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 AUTHORS TITLE gene gene determination and therapeutic screening using signature patent: WO 0194629-A 3116 13-DEC-2001; Avalon Pharmaceuticals (US)	Qy 181 ACCGCOTTTGCCASAGTTCAACAGGCCTTGGGGCCGCGGAAGGCCTGGCCGTTTGGGC 841 CCCTTTCTGAGGAGGGCCTGGGCCTAGGAGGAAGGCCTGGCCGTTTGGCC 841 CCCTTTCTGAGGAGGGCCCGGAAGAAAAAAAAAAAAAAA	Db 751 TCGGAGCACACTGTGGAAGGCCACCGTTTCCCTGCCGAGATCCACGTGGTTCACCTCAGC 810

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Query Match 100.0%; Score 1522; DB 6; Best Local Similarity 100.0%; Pred. No. 3.4e-311; Matches 1522; Conservative 0; Mismatches 0;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1639)
Strausberg, R.L., Feingold, B.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.
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Tissue Procurement: ATCC
cDNA Library Preparation: Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Genome Sequence Centre,
BC Cancer Agency, Vancouver, BC, Canada
info@bcgsc.bc.ca
Steven Jones, Jennifer Asano, Ian Boddet, Yaron Butterfield,
Susanna Chan, Readman Chiu, Chris Fjell, Brin Garland, Ran Guin,
Susanna Chan, Readman Chiu, Chris Fjell, Brin Garland, Ran Guin,
Letticia Hsiao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo
Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven
Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline
Schein, Duane Smailus, Michael Smith, Lorraine Spence, Jeff Stott,
Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy,
George Yang, Scott Zuyderduyn, Marco Marra.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINI at: http://image.llnl.gov Series: IRAL Plate: 34 Row: i Column: 18 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 9955947.
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NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
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Submitted (01-OCT-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
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                                                                               ACCGCCTTTGCCAGAGTTGACGAGGCCTTGGGGCCCCGGGAGGCCTGGCCGTGTTGGCC
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EBEGSIKLEDIPTVEAPGDPQEPQNNAHRDKEGDDQSHWRYGGDPPWPRVSPACAGRF
QSPVDIRPQLAAFCPALRPLEILGFQLPPLPBERLENNGHSVQLTEPPCEMALGPGR
GSPVDIRPQLAAFCPALRPLEILGFGLPPLPBERLENNGHSVQLTEPPCEMALGRFGEAVLA
EYRALQLHLHWGAAGRPGSEHTVEGHRFPAEIHVVHLSTAFKVEQXEGSLTTP
AFLEEGPEENGAYEQLISRLEEIAEBGSETQVPGLDISALLFSDFSRVEQYEGSLTTP
PCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSRLQLNFRATQPLNGRVIEASFPA
GYDSSPRAAEFVQLNSCLAAGDILALVFGLLFAVTSVAFLVQMRRQHRRGTKGGVSYR
PAEVAETGA"
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anhydrase" /note="carb_anhydrase; Region: Eukaryotic-type carbonic _xref="CDD:pfam00194"

ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCC ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCC Conservative 99.9%; Score 1520.4; Pred. No. 7.5e 0; Mismatches 0 4; DB 9; 0 60

9

Length

GACCAGAGTCATTGGCGCTATGGAGGCGACCCGCCCTGGCCCCGGGTGTCCCCCAGCCTGC GAGGCTCCTGGAGATCCTCAAGAACCCCAGAATAATGCCCACAGGGACAAAGAAGAGGGGAT CCACCCGGAGAGGATCTACCTGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCT GATGACCCACTGGGCGAGGAGGAGGATCTGCCCAGTGAAGAGGATTCACCCAGAGAGGAGGAGGAT CCCCAGAGGTTGCCCCGGATGCAGGAGGATTCCCCCCTTGGGAGGAGGCTCTTCTGGGGAA CCCCAGAGGTTGCCCCGGATGCAGGAGGATTCCCCCTTGGGAGGAGGCTCTTCTGGGGAA 180 cerecrecaesecrereseaerserserserserserrerearecerecresers CCTGCTCCAGGCCTCACTGCAACTGCTGCTGTCACTGCTGCTTCTGATGCCTGTCCAT 120 GAGGCTCCTGGAGATCCTCAAGAACCCCCAGAATAATGCCCCACAGGGACAAAGAAGGGGAT GATGACCCACTGGGCGAGGAGGATCTGCCCAGTGAAGAGGATTCACCCAGAGAGGAGGAT 480 512 420 360 240 212 272 452 392 300 332

572

632 540

600

840 872 812 720 660 692

9	841	GCCTTTCTGGAGGAGGGCCCGGAAGAAACAGTGCCTATGAGCAGTTGCTGTCTCGCTTG 900
Db	933	GCCTTTCTGGAGGAGGCCCGGAAGAAAACAGTGCCTATGAGCAGTTGCTGTCTCGCTTG 992
\$	901	GAAGAAATCGCTGAGGAAGGCTCAGAGACTCAGGTCCCAGGACTATATCTGCACTC 960
DЬ	993	GAAGAAATCGCTGAGGAAGGCTCAGAGACTCAGGTCCCAGGACTGGACATATCTGCACTC 1052
δ.	961	CTGCCCTCTGACTTCAGCCGCTACTTCCAATATGAGGGGTCTCTGACTACACCGCCCTGT 1020
дb	1053	CTGCCCTCTGACTTCAGCCGCTACTTCCAATATGAGGGGTCTCTGACTACACCGCCCTGT 1112
γQ	1021	GCCCAGGGTGTCATCTGGACTGTGTTTAACCAGACAGTGATGCTGAGGTGCTAAGCAGCTC 1080
DЬ	1113	GCCCAGGGTGTCATCTGGACTGTGTTTAACCAGACAGTGATGCTGAGTGCTAAGCAGCTC 1172
γQ	1081	CACACCCTCTGTGACACCCTGTGGGGACCTGGTGACTCTCGGGCTACAGCTGAACTTCCGA 1140
дb	1173	CACACCCTCTCTGACACCCCTGTGGGGGACCTGGTGACTCTCGGCTACAGCTGAACTTCCGA 1232
γQ	1141	GCGACGCAGCCTTTGAAIGGGCGAGTGAITGAGGCCTCCTTCCCTGCTGGAGTGGACAGC 1200
Dβ	1233	GCGACGCATTTGAATGGGCGAGTGATTGAGGCCTCCTTCCCTGCTGGAGTGGACAGC 1292
Qy	1201	AGTCCTCGGGCTGCAGCCAGTCCAGCTGAATTCCTGCCTG
ממ	1293	AGTCCTCGGGCTGAGCCAGTCCAGCTGAATTCCTGCCTGGCTGG
γQ	1261	GCCCTGGTTTTTGGCCTCCTTTTTGCTGTCACCAGCGTCCCTTGTGCAGATGAGA 1320
ф	1353	GCCCTGGTTTTTGGCCTCCTTTTTGCTGTCACCAGCGTCGCGTTCCTTGTGCAGATGAGA 1412
Ş	1321	AGGCAGCACAGAAGGGGAACCAAAGGGGGTGTGAGCTACCGCCCAGCAGAGGTAGCCGAG 1380
Db.	1413	AGGCAGCACAGAAGGGGAACCAAAGGGGGGTGTGAGCCTACCGCCCAGCAGAGGGTAGCCGAG 1472
8	1381	ACTGGAGCCTAGAGGCTGGATCTTGGAGAATGTGAGAGAGCCAGCC
дb	1473	ACTGGAGCCTAGAGGCTGGATCTTGGAGAATGTGAGAAGCCAGCC
VΩ	1441	GGAGCCGGTAACIGTCCTGTCCTGCTCATTATGCCACTTCCTTTTAACTGCCAAGAAATT 1500
DЬ	1533	GGAGCCGGTAACTGTCCTGTCCTGCTCATTATGCCACTTCCTTTTAACTGCAAAGAAATT 1592
γQ	1501	TTTTAAAATAATATATTATAAT 1522
뮹	1593	TITTAAAITAAATATTIATAAT 1614

Search completed: March 7, 2004, 04:36:17 Job time : 4053 secs

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Database
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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Maximum DB seq length: 2000000000
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4: geneseqn2010las:*
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Copyright (c) 1993 - 2004 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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Result No.	Score	55	Length	BG		Description
1	1522	100.0	1522	2 !	AAT09186	Aat0918
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ω	1522	80.	S	ω	245	Aaa5245
4	1522	00.	ទ	თ	77	Ab1647
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6	1522	00.	ម	Ø	ABL65416	Ab165416
7	1522	.0	ភ	ጣ	w	Ab168346
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10	1522		55	7	38	7638
11	1522		1552	7	ABX76124	Abx76124
12	- 1	0	83	4	55	655
13	30	<u>ب</u>	1397	N		Aaq48456
14	14.	27.2	6521	ω	ADB53977	Adb53977
15	414.4	7.	10897	N	AAT09187	Aat09187
16	\mathbf{H}	7.	10898	w	AAA16543	Aaa16543
17	414.4	7.	10898	w	AAA52462	Aaa52462
18	13.	.7	445	w	655	Aaa16555
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143	143	145	145	158	158	171	171	180.4	180.4	191	191	194	222	222.4	230	230.4	233.4	233.4	293	293.8	297
9.4	9.4	9.5	9.5	10.4	10.4	11.2	11.2	11.9	11.9	12.5	12.5	12.7	14.6	14.6	15.1	15.1	15.3	15.3	19.3	19.3	19.5
143	143	145	145	158	158	171	171	1401	1401	191	191	243	6521	6521	6521	6521	470	470	305	434	297
w	w	ω	w	w	W	ω	w	w	w	w	w	თ	φ	φ	ø	9	w	w	4	ហ	4
AAA52477	AAA16558	AAA52481	AAA16562	AAA52480	AAA16561	AAA52476	AAA16557	AAA52495	AAA16576	AAA52484	AAA16565	ABL86991	ADB54270	ADB54269	ADB54142	ADB54141	AAA52496	AAA16577	AAS23827	AAH82384	AAS24411
Aaa52477	Aaa16558	Aaa52481	Aaa16562	Aaa52480	Aaa16561	Aaa52476	Aaa16557	Aaa52495	Aaa16576	Aaa52484	Aaa16565	Ab186991	Adb54270	Adb54269	Adb54142	Adb54141	Aaa52496	Aaa16577	Aas23827	Aah82384	Aas24411
Human MN	1.4 kb GC	Human MN	Human MN	Human MN	Human ova	Pretreate	Pretreate	Pretreate	Pretreate	Probe use	MN RNA pr		Human ova	Human ova							

ALIGNMENTS

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MuTu; endogenous; cellular component; MN; HeLa cell; diagnosis; lymphocytic choriomeningitis virus; LCMV; putative oncogene; treavenephastic; pre-neophastic; disease; antisense therapy; antibody; vaccine; vertebrate; immunisation; ss.
                                                                                                                                                      WO9534650-A2
                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                          MuTu putative oncogene MN cDNA.
                                                                                                                                                                                                                                                        25~MAR-2003
19-AUG-1996
                                                                                                                                                                                                                                                                            AAT09186;
                                                                                                                                                                                                                                                                                         AAT09186 standard; cDNA; 1522 BP.
                                                                                                                                                                                                                                                       (revised)
(first entry)
                                                                                                                                                                   Location/Qualifiers
13. .1392
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treatment;

15-JUN-1994 07-JUN-1995 07-JUN-1995 07-JUN-1995 07-JUN-1995 07-JUN-1995 07-JUN-1995 07-JUN-1995 Zavada J, (CIBA) CIBA CORNING DIAGNOSTICS CORP. (VIRO-) INST VIROLOGY. 15-JUN-1995; 21-DEC-1995. Pastorekova 94US-00260190. 95US-00477504. 95US-00481658. 95US-00485049. 95US-00485862. 95US-00485863. 95US-00486756. 95WO-US007628 Ś Pastorek

WPI; 1996-049679/05. P-PSDB; AAR88058.

MN gene, protein and nucleic acid fragments - used as primers and probes

840 840

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Query Match
Best Local Sim
Matches 1522;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence is the full length MuTu endogenous cellular component, MN, cDNA clone, which was isolated from lymphocytic choriomeningitis virus (LCMV) infected HeLa cells. Persistent LCMV, the exogenous MuTu transmissible agent (MX), infection increases the expression level of the MN gene. MN is a putative oncogene, and can therefore be used in the development of prods. for the diagnosis and treatment of neoplastic (NP), or pre-NP diseases. NP diseases can be treated using DNA antisense to MN transcribed mRNA, anti-MN protein antibodies can be used for the diagnosis NP or pre-NP diseases and a vaccine contg. immunogenic amounts of the MN protein can be used to immunise a vertebrate against a NP disease associated with MN antigen expression. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGCTCCTGGAGATCCTCAAGAACCCCCAGAATAATGCCCCACAGGGACAAAGAAGGAGGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCCAGAGGTTGCCCCGGATGCAGGAGGATTCCCCCCTTGGGAGGAGGATCTTCTGGGGAA
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                                                                                                                                                                                                       AACAATGGCCACAGTGTGCAACTGACCCTGCCTCCTGGGCTAGAGATGGCTCTGGGTCCC
                                                                                                                                                                                                                                                     CTGCGCCCCCTGGAACTCCTGGGCTTCCAGCTCCCGCCGCTCCCAGAACTGCGCCTGCGC
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The invention relates to the inhibition of cell adhesion mediated by the MW oncoprotein (also known as the MW/CA IX isoenzyme or the MM/C250 protein). The MM protein is a tumour-associated adhesion molecule which comprises a proteoglycan-like (PG) domain (AAB03017) which contains the protein's binding site, and a carbonic anhydrase (CA) domain (AAB03018). Abnormal expression of the MM protein is associated with tumorigenicity. The invention encompasses molecules (e.g., proteins and peptides) which specifically bind to a site on the MM protein, thereby preventing adhesion of vertebrate cells to the protein in a cell adhesion assay. It calso encompasses MN proteins or MN protein in a cell adhesion decreases MN proteins or MN protein the adhesion of vertebrate cells to the protein the adhesion of vertebrate cells to the each other. The invention also relates to the identification of the binding site of the MN protein and to a method of identifying a site of the invention adhere, comprising testing a series of overlapping peptides from the protein in a cell adhesion assay. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MN protein; tumour associated cell adhesion molecule; oncoprotein; proteoglycan domain; PG domain; carbonic anhydrase; CA domain; abnormal expression; neoplastic disease; cancer; gene therapy; ss.
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(VIRO-) INST VIROLOGY.
                                                                                                                                                                                                                                                                                molecule which specifically binds to a site on MN protein (oncoprotein) nd prevents adhesion of vertebrate cells to the protein, useful for reating preneoplastic or neoplastic diseases such as cancer.
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                                                                                                                                                                                                       invention encompasses a vector comprising an expression control sequence operatively linked to a nucleic acid encoding the variable domains of a MN-specific antibody, where the domains are separated by a flexible linker peptide (AAB03035) and the vector inhibits the growth of a vertebrate preneoplastic or neoplastic cell that abnormally expresses MN protein. The invention also encompasses a vector comprising a nucleic acid encoding a cytotoxic protein or peptide operatively linked to the MN gene promoter, which inhibits the growth of a vertebrate preneoplastic or neoplastic cell. Also claimed is a repressor complex that binds to the MN gene promoter (AAA52473). MN proteins and peptides, and expression vectors encoding such proteins and peptides are useful for treating patients with preneoplastic or neoplastic disease (e.g., cancers) associated with or characterised by abnormal MN expression.
                                                                                                                                 Sequence
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(AVAL-) AVALON PHARM.

PE, Augustus Weaver Z Z X <u>ਨ</u> Ebner ø Endress Ó Horrigan ŝ

2002-188264/24.

Screening for anti-neoplastic agent involves exposing cells to a chemical agent to be tested for anti-neoplastic activity, and determining a change in expression of a gene of a signature gene set.

SEQ ID NO 3116; 44pp; English.

The present invention describes a method (MI) for screening for an antineoplastic agent. The method involves exposing cells to a chemical agent to be tested for anti-neoplastic activity, determining a change in expression of at least one gene (I) of a signature gene set, where (I) comprises a sequence (S) selected from 8447 sequences (given in ABL61664 to ABL70110), or is at least 95% identical to (S), where a change in expression is indicative of anti-neoplastic activity. (I) has cytostatic activity and can be used in gene therapy. MI can be used for screening an anti-neoplastic agent, and can be used for producing a product which is the data collected with respect to the anti-neoplastic agent as result of MI, and the data is sufficient to convey the chemical structure and/or properties of the agent. MI can be used in the treatment of cancer such as colon, breast, stomach, lung, thyroid, oesophageal, ovarian, kidney,

WO200194629-A2

Sequence

1552

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Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 1522; Conservative 0
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The present invention describes a method (M1) for screening for an anticondepplastic agent. The method involves exposing cells to a chemical agent to be tested for anti-neoplastic activity, determining a change in CC expression of at least one gene (I) of a signature gene set, where (I) comprises a sequence (S) selected from 8447 sequences (given in ABL6164 CC comprises a sequence (S) selected from 8447 sequences (given in ABL6164 CC expression is indicative of anti-neoplastic activity. (I) has cytostatic contributy and can be used in gene therapy. MI can be used for screening an CC anti-neoplastic agent, and can be used for producing a product which is the data collected with respect to the anti-neoplastic agent as a result CC of M1, and the data is sufficient to convey the chemical structure and/or CC properties of the agent. MI can be used in the treatment of cancer such CC as colon, breast, stomach, lung, thyroid, oesophageal, ovarian, kidney, CC properties of the agent and cancer, infiltrating lobular cancer, squamous call carcinoma, neuroendocrine carcinoma, papillary carcinoma and Wilm's
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Soppet DR,
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Soppet Young PE, Augustus Weaver Z Z 3 Carter S, Ebner ₽, Endress ်ပ Horrigan ŝ

2002-188264/24.

Screening for anti-agent to be tested in expression of a for anti-neoplastic agent involves exposing be tested for anti-neoplastic activity, and sion of a gene of a signature gene set. y cells to a determining chemical a change

Claim 1; SEQ ID NO 3753; 44pp; English.

CC The present invention describes a method (M1) for screening for an antiCC neoplastic agent. The method involves exposing cells to a chemical agent
CC to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening an
CC anti-neoplastic agent, and can be used for producing a product which is
CC the data collected with respect to the anti-neoplastic agent as a result
CC of M1, and the data is sufficient to convey the chemical structure and/or
CC properties of the agent. M1 can be used in the treatment of cancer such
CC properties of the agent. M1 can be used in the treatment of cancer such
CC properties of the agent. M1 can be used in the treatment of cancer such
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CC properties of the agent. M1 can be used in the treatment of cancer such
CC properties of the anciraction, oesophageal, ovarian, kidney,
CC prostate or pancreatic cancer, adenocarcinoma, carcinoma, clear cell
CC cancer, infiltrating ductal cancer, squamous
CC call carcinoma, neuroendocrine carcinoma, papillary carcinoma and Wilm's
CC tumour

Sequence 1552 B₽; 302 A 471 ü 461 <u>.</u> 318 <u>..</u> 0 <u>ا</u> 0 Other;

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Length

밁 S 멂 Ś 片 δ Query Match
Best Local Similarity
Matches 1522; Conserv 151 121 91 6 ω CCTGCTCCAGGCCTCACTGTGCAACTGCTGCTGTCACTGCTTCTGATGCCTGTCCAT ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCC CCCCAGAGGTTGCCCCGGATGCAGGAGGAGGATTCCCCCCTTGGGAGGGCTCTTCTGGGGAA ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCC ĊĊĊAĠĀĠĠŦŦĠĊĊĊĊĠĠĀŦĠĊĄĠĠĄĠĠĀŦŦĊĊĊĊĊŦŦĠĠĠAĠĠAĠĠĊŦĊŦŦĊŦĠĠĠĠĀĀ 100.0%; ilarity 100.0%; Conservative 0 0 Score 1522; Pred. No. 0; 0; Mismatches CACTGCTGCTTCTGATGCCTGTCCAT <u>,</u> Indels 0 Gaps 210 180 150 120 90

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18-SEP-2000;
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cc neoplastic agent. The method involves exposing cells to a chemical agent
to be tested for anti-neoplastic activity, determining a change in
cc expression of at least one gene (I) of a signature gene set, where (I)
cc comprises a sequence (S) selected from 847 sequences (given in ABL6164
cc to ABL70110), or is at least 95% identical to (S), where a change in
cc expression is indicative of anti-neoplastic activity. (I) has cytostatic
cc activity and can be used in gene therapy. M1 can be used for screening an
cc anti-neoplastic agent, and can be used for producing a product which is
cc the data collected with respect to the anti-neoplastic agent as a result
cc of M1, and the data is sufficient to convey the chemical structure and/or
cc properties of the agent. M1 can be used in the treatment of cancer such
cc as colon, breast, stomach, lung, thyroid, oesophageal, ovarian, kidney,
cc properties of the agent acancer, infiltrating lobular cancer, squamous
cc cancer, infiltrating ductal cancer, infiltrating lobular cancer, squamous
cc ll carcinoma, neuroendocrine carcinoma, papillary carcinoma and Wilm's
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 1522; Conserv
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02-OCT-2000; 2000US-0237173P.
02-OCT-2000; 2000US-0237278P.
02-OCT-2000; 2000US-0237294P.
02-OCT-2000; 2000US-0237316P.
02-OCT-2000; 2000US-02373425P.
03-OCT-2000; 2000US-0237694P.
03-OCT-2000; 2000US-0237604P.
03-OCT-2000; 2000US-0237606P.
03-OCT-2000; 2000US-0237608P.
03-OCT-2000; 2000US-0234867P.
01-NOV-2000; 2000US-0244867P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Screening for anti-neoplastic agent involves exposing cells to a chemical agent to be tested for anti-neoplastic activity, and determining a change in expression of a gene of a signature gene set.
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                      The present invention describes an isolated nucleic acid molecule, which comprises the sequence of any of the genes that are up-regulated or down-regulated in specific cancers (e.g. about 1031 genes up-regulated in a caute lymphocytic leukemia). ACC72641 to ACC72680 represent cancer related gene nucleotide sequences which encode the proteins given in ARR58521 to ARR58979. Also described: (1) determining the presence or a pathological cell in a patient; (2) an expression vector comprising a nucleic acid molecule described above; (3) a host cell comprising the vector; (4) an isolated polypeptide, which is encoded by the nucleic acid; (5) an antibody that specifically binds the polypeptide of (4); (6) specifically targeting a compound to a pathological cell in a gratient by administering to the patient the antibody above; and (7) a comparising a sasy. The nucleic acid is useful as diagnostic markers or therapatic targets. In particular, the nucleic acid is useful for chargesulvic targets. In particular, the nucleic acid is useful for company, breast, cervix, colon/rectum, kidney, lung, ovary, colonders, brain, breast, cervix, colon/rectum, kidney, lung, ovary, colories, skin and endometriosis. The nucleic acid is also useful in a therosclerosis and endometriosis. The nucleic acid is also useful in a pathology, particularly for identifying agents for treating these
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                                                                                                                                      cancer;
                                                                                                                                                                     Nucleotide sequence
                                                                                                                                                                                    28-MAY-2003
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                               26-JUL-2001;
24-JUL-2002;
     Riggins
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ilarity 100.0%;
Conservative 0
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WPI; Inhibiting angiogenesis for treating wound healing, retinopathy, ischemia, inflammation, microvasculopathy, bone healing, skin inflammation or follicular development by providing to a subject antisense polynucleotide. 2003-239423/23. цe

66pp; English.

The present sequence encodes a human CA9 polypeptide. It is used in the method of the invention. The specification describes a method modulating angiogenesis associated with wound healing, retinopathy, ischemia, inflammation, microvasculopathy, bone healing, skin inflammation or follicular development. The method comprises providing to a subject HOG3, HOG18, CA9, HXB, IGRBP5, HFARP, STC1, mig-6 or SSR4. The methods, antisense polymucleotides, polypeptides and antibodies are useful for treating wound healing, retinopathy, ischemia, inflammation, microvasculopathy, bone healing, skin inflammation or follicular development, or cancer such as breast, colon or lung cancer, or

BP; 302 A; 471 C; 461 G; 318 T; 0 U; 0 Other; Length 1552;

Score 1522; Pred. No. 0;

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ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCCGGCC GAGGCTCCTGGAGATCCTCAAGAAACCCCAGAATAATGCCCACAGGGACAAAAGAAGGGGGAT CCTGCTCCAGGCCTCACTGTGCAACTGCTGCTGCTGCTGCTGCTGCTGCTGATGCCTGTCCAT CTGCGCCCCGGAACTCCTGGGCTTCCAGCTCCCGCGCTCCCAGAACTGCGCCTGCGC gededecedetrecadrecededrodararecedecededecededecerrerecedede gaccagaercarregederaregaegedaecedeceregedecedegererecedaecerec GACCAGAGTCATTGGCGCTATGGAGGCGACCCGGCCTGGCCCCGGGTGTCCCCAGCCTGC CCACCCGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCTGGAGAGAGGAGGATCTACCT GATGACCCACTGGGCGAGGAGGATCTGCCCAGTGAAGAGGATTCACCCAGAGAGGAGGATGAT ccccaeaeerrecccceearecaeeaeearrcccccrreeeaeeaeecrcrreeeaa CCCCAGAGGTTGCCCCGGATGCAGGAGGATTCCCCCTTGGGAGGAGGAGGTCTTCTGGGGAA <u>Acadroadecedaridactico con disco con decentración de mesentación de de mesentación de desentación de mesentación de mesentación de desentación de desentación de desentación de desentación de desentación de desentaci</u> GGGCGGGAGTACCGGGCTCTGCAGCTGCATCTGCACTGGGGGGGCTGCAGGTCGTCCGGGC AACAATGGCCACAGTGTGCAACTGACCCTGCCTGGGCTAGAGATGGCTCTGGGTCCC ARCAATGGCCACAGTGTGCAACTGACCCTGCCTCCTGGGCTAGAGATGGCTCTGGGTCCC GAGGCTCCTGGAGATCCTCAAGAACCCCAGAATAATGCCCCACAGGGACAAAGAAGGAGGGAT CCACCCGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCT GATGACCCACTGGGCGAGGAGGATCTGCCCAGTGAAGAGGATTCACCCAGAGAGGAGGAT crecececereda Acrecresecrico Ascrece escentro de Consecuente de Co ٥. Mismatches 0; Indels 240 180 150 120 90 420 360 210 660 630 600 570 540 480 450 390 330 300 270

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10-MAY-2001; 2001US-0290432P.
09-MOV-2001; 2001US-0339245P.
13-NOV-2001; 2001US-0350666P.
29-NOV-2001; 2001US-0334370P.
12-APR-2002; 2002US-0372246P.
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Detecting a lung cancer-associated transcript in a cell from for treating lung cancer, by contacting a biological sample patient with a polynucleoride that exhibits increased or decr expression in lung cancer. decreased

Claim 22; Page 379-380; 453pp; English

The invention relates to a method for detecting a lung cancer-associated contranscript in a cell from a patient, comprising contacting a biological contacting to the patient with a polynucleotide that selectively hybridises to a sequence that is at least 80 % identical to a gene that exhibits concreased or decreased expression in lung cancer samples. Lung cancer-compound that modulates a lung cancer-associated polymeptide, for compound that modulates a lung cancer-associated polypeptide, for cancer in a patient and for treating a mammal having lung cancer by cancer in a patient and for treating a mammal having lung cancer, such as small cell lung cancer, non-small cell for treating lung cancer, such as small cell lung cancer, non-small cell for treating lung cancer, such as small cell lung cancer, non-small cell compound that modulatery compound identified. The methods are useful for treating lung cancer, such as small cell lung cancer, non-small cell compounds that modulater interstitial pulmonary fibrosis, asthma and bronchicts. The genes, polynucleotides and polypeptides are useful for disposition purposes and as targets for screening for therapeutic compounds that modulate lung cancer, such as antibodies. Sequences and polynucleotides of the invention.

Sequence 1552 ВP; 302 A; 471 C; 461 G; 318 Η. 0 ς, 0 Other;

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antiinflammatory; antiasthmatic; non-small cell lung cancer; atelectasis;
small cell lung cancer; benign lession; precancerous lesion; bronchitis;
chronic obstructive pulmonary disease; hypersensitivity pneumonitis;
interstitial pulmonary fibrosis; fibrosis; asthma; bronchiectasis.
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18-APR-2001; 10-MAY-2001; 09-NOV-2001; 13-NOV-2001; 29-NOV-2001; (EOSB-) 18-APR-2002; EOS 2001US-0284770P. 2001US-0290492P. 2001US-0339245P. 2001US-0339245P. 2001US-033970P. 2001US-0372246P. BIOTECHNOLOGY

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WPI; 200 P-PSDB; 2003-093161/08. DB; ABU56408.

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Detecting a lung cancer-associated transcript in a cell from a patient for treating lung cancer, by contacting a biological sample from the patient with a polynucleotide that exhibits increased or decreased expression in lung cancer.

Claim 22; Page 189; 453pp; English.

The invention relates to a method for detecting a lung cancer-associated transcript in a cell from a patient, comprising contacting a biological sample from the patient with a polynucleotide that selectively hybridises to a sequence that is at least 80 % identical to a gene that exhibits increased or decreased expression in lung cancer samples. Lung cancer-associated polynucleotides and polypeptides are used for identifying a compound that modulates a lung cancer-associated polypeptide, for inhibiting proliferation of a lung cancer-associated polypeptide, for cancer in a patient and for treating a mammal having lung cancer by administering a modulatory compound identified. The methods are useful for treating lung cancer, such as small cell lung cancer, non-small cell

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cc which is the endogenous component of the MaTu agent. MaTu is a novel quasi-viral agent with rather unusual properties. It is presumably cc derived from a human mammary tumour. In some aspects it resembles cc classical viruses, whereas in other respects it resembles "slow" viruses (prions), and in still other aspects it is different from both classes of cc viruses. MaTu is a two component sytem. One part of the complex cc exogenous MX, is transmissible, and is manifest by a protein, p50%, which cc is a cytoplasmic antigen which reacts with some natural sera, of humans cells. MN is a cellular gene showing very little homology with known DNA sequences. It is rather conservative and present as a single copy in the cx converse of twin protein p54/58N, that is localised on the cell surface and in the nucleus. Immunoblots using a monoclonal antibody reactive with p54/58N correspond to one type of protein that differs by glycosylation pattern or by how it is processed. The expression of the MN gene is strongly correlated with tumourigenicity. MN products can be used in can be used in diagnostic and/or prognostic assays for neoplastic and/or precomposed in cansays for neoplastic and/or precomposed in can be used in can be 
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                                                 The invention relates to a novel method for detecting and differentiating between colon cell proliferative disorders associated with at least one gene or its regulatory regions. The method comprises contacting a target nucleic acid in a biological sample obtained from the subject with at least one reagent or a series of reagents, where the reagent or series of reagents, where the reagent or series of inucleotides within the target nucleic acid. The molecules of the invention demonstrate cytostatic activity whilst the method may useful for detecting and differentiating between colon cell proliferative disorders, including cancers such as colon adenoma and colon carcinoma. The PNA (peptide nucleic acid)-oligomers are useful as probes for determining cytosine methylation state or single nucleotide polymorphisms. The current sequence is that of the genomic DNA region of the fivention. This sequence is not shown within the specification but is
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                                                                                                                                                                           The present sequence is the complete MuTu endogenous cellular component, MM, genomic DNA, which was isolated from lymphocytic choriomeningitis virus (LCMV) infected HeLa cells. Persistent LCMV, the exogenous MuTu transmissible agent (MX), infection increases the expression level of the MN gene. MN is a putative oncogene, and can therefore be used in the development of prods. For the diagnosis and treatment of meoplastic (NP), or pre-NP diseases. NP diseases can be treated using DNA antisense to MN transcribed mRNA, anti-MN protein antibodies can be used for the diagnosis NP or pre-NP diseases and a vaccine conts. immunosenic amounts of the MN protein can be used to immunise a vertebrate against a NP disease associated with MN antigen expression. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                                                         MN gene, protein and nucleic acid fragments - used as primers and probes in the detection of MN antigens and antibodies, and in the treatment of (pre)neoplastic disease.
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Perfect score:
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score greater than or equal to the score of the result being printed
and is derived by analysis of the total score distribution.
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  Copyright
                                                                   GenCore version (c) 1993 - 2004
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US-08-787-739-1
US-08-487-0773-1
US-08-485-863A-1
US-08-485-049D-1
US-08-178-115-1
US-09-177-776-1
US-09-335-469-1
US-08-335-469-1
PCT-US93-020241
US-08-481-658B-5
US-08-477-504A-5
US-08-486-756A-5
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US-08-485-562B-28
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US-08-477-504A-1
US-08-486-756A-1
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Compugen Ltd
Sequence 1, Appli
Sequence 5, Appli
Sequence 28, Appli
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                                                                                              ; TOPOLOGY: lin
; MOLECULE TYPE:
; HYPOTHETICAL: N
; ANTI-SENSE: NO
US-08-481-658B-1
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US-08-481-658B-1
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    Query Match
Best Local Similarity
Matches 1522; Conserv
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CITY: Tiburon
CTATE: California
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ALIGNMENTS

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CORREST AFFICATION NUMBER: US/08/481,658B
PFILING DATE: 07-UN-1995
CLASSIFICATION 1244
PRIOR APPLICATION 1424
PRIOR APPLICATION DATE: US 08/260,190
FILING DATE: 15-UN-1994
ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: D-0021.3E
REGISTRATION NUMBER: D-0021.3E
REGISTRATION NUMBER: D-0021.3E
TELECOMOUNICATION INFORMATION:
TELEPHONE: 415-435-2034
TELEPHONE: 415-435-0727
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
1-ENCRYH: 1522 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: USA
ZIP: 94920
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATIBLE
COMPUTER: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Leona L. Lauder
STREET: 6 Mariposa Court
                                                                                                                                                                                                   LENGTH: 1522 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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                   100.0%;
Score 1522;
Pred. No. 0;
O; Mismatches
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481 GCGGGCCGCTTCCAGTCCCCGGTTGAATATCCGCCCCCAGCTCGCCCGCC	1 ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCTGTTGATCCCGGCC 60
RESULT 2 US-08-477-504A-1 ISGQUENCE 1, Application US/08477504A Sequence 1, Application US/08477504A Palent No. 597233 GENERAL INFORMATION: APPLICANT: Zavada, Jan APPLICANT: Pastcrek, Jaromir TITLE OF INCENTION: MN Gene and Protein NUMBER OF SEQUENCES: 86 CORRESPONDENCE ADDRESS: ADDRESSEN: Leona L. Lauder STREET: 6 Mariposa Court CITY: TIBLUON STATE: California COUNTRY: USA ZIP: 9420 COMPUTER READLABLE FORM: MEDIUM TYPE: Ploppy disk COMPUTER READLABLE FORM: MEDIUM TYPE: Ploppy disk COMPUTER: IBM PC compatible COMPUTER: IBM PC compatible COMPUTER: IBM PC compatible COMPUTER: IBM PC compatible COMPUTER: USA ZIP: 9420 COMPUTE	Oy 1081 CACACCCTCTGTGACACCCTGTGGGGACCTGGTGACTTCCGACTTACAGCTGACTTCCGA 1140 1081 CACACCCTCTCTGACACCCTGTGGGGACCTGGTGACTTCCGACTTACAGCTGAACTTCCGA 1140 1092 1141 GCGACGCAGCCTTTGAATGGGCGAGTGATTGAGGCCTCCTTCCCTGCTGAGTGGACAGC 1200 1141 GCGACGCAGCCTTTGAATGGGCGAGTGATTGAGGCCTCCTTCCCTGCTGAGTGGACAGC 1200 1141 GCGACGCAGCCTTTGAATGGGCGAGTGATTGAGGCCTCCTTCCCTGCTGAGTGGACAGC 1200 1141 GCGACGCAGCCTTTGAATGGGCCAGTCCAATTCCTGCCTG

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STRANDEDNESS: single
TOPOLOGY: linear
HOLECULE TYPE: CDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
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  GAAGAAATCGCTGAGGAAGGCTCAGAGACTCAGGTCCCAGGACTGGACATATCTGCACTC
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Pred. No. 0;
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Patent No. 5981711
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Pr.
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
US-08-486-756A-1
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COUNTRY: USA

ZIP: 94920

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER; IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/486,756A
FILING DATE: 07-UW-1995
CLASSIFICATION DATA:
APPLICATION TOTAL
APPLICATION DATA:
APPLICATION DAT
                                                                                                                                                                                                                                                                                                                                                             STREET: 6 Mar:
CITY: Tiburon
                                                                                                                                                                                                                                                                                                                                        STATE: California
                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Leona L. Lauder
STREET: 6 Mariposa Court
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; MOLECULE TYPE:
; HYPOTHETICAL: N
; ANTI-SENSE: NO
US-08-486-756A-1
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REGISTRATION NUMBER: 30,863
REFERENCE,DOCKET NUMBER: D-00
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-435-2034
TELEPAX: 415-435-0727
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1522 base pairs
TYPE: nucleic acid
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Best Local Similarity 100.0%;
Matches 1522; Conservative 0
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TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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Fatent No. 5989338
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Pro
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
ADDRESSEE: Leona L. Lauder
STREET: 6 Mariposa Court
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STREET: 6 Mariposa Court
CITY: Tiburon
STATE: California
COUNTRY: USA
COUNTRY: USA
ZIP: 94920
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
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US-08-485-862B-1
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Best Local Similarity
Matches 1522; Conserv
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SOFTWARE: PATENTIN Release #1.0, Version #1.
CURRENT APPLICATION DATA;
APPLICATION NUMBER: US/08/485,862B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA;
APPLICATION NUMBER: US 08/477,504
FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-JUN-199
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-JUN-199
APTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION NUMBER: D-0021.3D
REFERENCE/DOCKET NUMBER: D-0021.3D
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-435-7077
TELEPHONE: 415-435-7077
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LENGTH: 1522 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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INFORMATION FOR SEQ ID NO: 1:
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MOLECULE TYPE:
HYPOTHETICAL: N
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 Zavada, Jan
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Query Match Best Local Similarity 100.0%; Score 1522; DB 3; Length 1522; Best Local Similarity 100.0%; Pred. NO. 0; Matches 1522; Conservative 0; Mismatches 0; Indels 0; Gaps 0; 1 ACAGTCAGCCGATGGCTCCCCTGTGCCCAGCCCCTGGCTCCTCTGTTGATCCCGGCC 60;	TELEPHONE: 415-981-2034 TELEPHONE: 415-981-0332 INFORMATION FOR SEG ID NO: 1: SEQUENCE CHARACTERISTICS: LENGTH: 1522 base pairs TYPE: nucleic acid STRANDEDNESS: double TOPOLOGY: linear MOLECULE TYPE: cDNA HYPOTHETIAL: NO ANTI-SENSE: NO ANTI-SENSE: NO	FILING DATE: 07-UN-1995 FRIOR APPLICATION UMBER: US 08/485,863 FILING DATE: 07-UN-1995 FILING DATE: 07-UN-1995 FILING DATE: 07-UN-1995 APPLICATION UMBER: US 08/487,077 FILING DATE: 07-UN-1995 ATTORNEY/AGENT INFORMATION: NAME: Lauder Leona L. REGISTRATION NUMBER: US -0021.4 TELECOMMUNICATION INFORMATION: TELECOMMUNICATION INFORMATION:	1995 US 08/486, 1995 US 08/477, 1995 US 08/481, 1995	NI NASE E PER L'ET
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TYPE: nucleic acid STRANDENESS: single TOPOLOGY: linear MOLECULE TYPE: CNNA HYPOTHETICAL: NO ANTI-SENSE: NO US-08-487-077A-1 Query Match Best Local Similarity 100.0%; Score 1522; DB 3; Length 1522; Best Local Similarity 100.0%; Pred. No. 0; Matches 1522; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Matches 1522; Conservative 0; Mismatches 0; Indels 0; ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCTGGCTCCCTCTGTTGATCCCGGCC 60 Db 1 ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCC 60	INJUSTICAL TRANSPORTATION NAME: Lauder, Leona L. REFERENCE/DOCKET NUMBER: .D-0021.3H REFERENCE/DOCKET NUMBER: .D-0021.3H TELECOMMUNICATION INFORMATION: TELEPHONE: 415-435-2034 TELEPHAX: 415-435-0727 INFORMATION FOR SEQ ID No: 1: SEQUENCE CHARACTERISTICS: LENGTH: 1522 base pairs	MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COMPATIBLE COMPUTER: PATEN: PC_DOS/MS-DOS SOFTMAZE: PatentIn Release #1.0, Version #1.30 (EPO) CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/487,077A FILING DATE: 07-JUN-1995 CLASSIFICATION: 514 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 08/260,190 FILING DATE: 15-JUN-1994 ATTORNEY/ACTION NUMBER: 15-JUN-1994 ATTORNEY/ACTION NUMBER: 15-JUN-1994 ATTORNEY/ACTION NUMBER: 15-JUN-1994	PASTOTEK, JÄR RVENTION: MN G EQUENCES: 86 NCE ADDRESS: : Leona L. La : Leona L. Ca t Mariposa Cou buron alifornia USA 20 ADABLE FORM:	RESULT 6 US-08-487-077A-1 Sequence 1, Application US/08487077A Patent No. 6069242 GENERAL INFORMATION: APPLICANT: Zavada, Jan APPLICANT: Pastorekova, Silvia	1261 GCCCTGGTTTTTGGCCTCCTTTT 1321 AGGCAGCACAGAAGGGGAACCAA 1321 AGGCAGCACAGAAGGGGAACCAA 1321 AGGCAGCACAGAAGGGGAACCAA 1381 ACTGGAGCCTAGAGGCTGGATCT 1381 ACTGGAGCCTAGAGGCTGGATCT 1441 GGAGCCGGTAACTGTCCTGTCCT 1441 GGAGCCGGTAACTGTCCTGTCCT 1441 GGAGCCGGTAACTGTCCTGTCCT 1441 GGAGCCGGTAACTGTCCTGTCCT 1501 TTTTAAATAATAATTATTATATTTATATT 1501 TTTTAAATAATAATTATTATATTATATTTATATTTATATTTATA
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Db 901 GAAGAATCCTCTGAGGAAGGCTCAGGACTCAGGACTCAGGACTAGACCTTGCACTTC 960 961 CTGCCCTCTGACTTCAGCCGCTACTTCCAATATGAGGGTCTCTGACTACACCGCCCTGT 1020 961 CTGCCCTCTGACTTCAGCCGCTACTTCCAATATGAGGGGTCTCTGACTACACCGCCCTGT 1020 961 CTGCCCTCTGACTTCAGCCGCTACTTCCAATATGAGGGGTCTCTGACTACACCGCCCTGT 1020 1021 GCCCAGGGTGTCATCTTGGACTTGTTTTAACCAGACAGTGATGCTGAGTGCTAAGCCAGCTC 1080 1021 GCCCAGGGTGTCATCTGGACTGTGTTTTAACCAGACAGTGATGCTGAGTGCTAAGCAGCTC 1080 1021 GCCCAGGGTGTCATCTGGACTGTGTTTAACCAGACAGTGATGCTGAGTGCTAAGCAGCTC 1080 1021 GCCCAGGGTGTCATCTGGACTGTGTTTAACCAGACAGTGATGCTGAACTTCCGA 1140 1081 CACACCCTCTCTGACACCCTGTGGGGACCTGGTGACTCTCGGCTACAGCTGAACTTCCGA 1140 1081 CACACCCTCTCTGACACCCTGTGGGGACCTGGTGACTCTCCGGCTACAGCTGAACTTCCGA 1140	GCCTTGGGGCGCCCGGGAGGCCTGGCCGTC	Qy 601 AACAATGCCACACHGTGCCACCTGCCTCTGCGCTAGAGATGCTCTGGGTTCC 660	421 GACCAGAGTCATTGGCGCTATGGAGGCGACCCGGCCCTGGCCCGGGCTCCCAGCCTGCCAGCCTGC 48 481 GCGGGCCGCTTCCAGTCCCGGTGGATATCCGCCCCCAGCTCGCCGCCCTCTGCCCCGGCC 54 481 GCGGCCGCTTCCAGTCCCCGGTGGATATCCGCCCCCAGCTCGCCGCCCTTCTGCCCCGGCC 54 481 GCGGCCCCTTCCAGTCCCCGGTGGATATCCCGCCCCAGCTCCGCCGCCTTCTGCCCCGGCC 54 541 CTGCGCCCCCTGGAACTCCTGGGCTTCCAGCTCCCGCCGCTCCCAGAACTGCGCCTGCGC 60 541 CTGCGCCCCTGGAACTCCTGGGCTTCCAGCTCCCGCCGCTCCCAGAACTGCGCCTGCGC 60	CTACCTACTG CTACCTACTG CTACCTACTG AAAGAAGGGG AAAGAAGGGG	Qy 61 CCTGCTCCAGGCCTCACTGTGCAACTGCTGCTGCTGCTGCTTCTGATGCCTGTCCAT 120 Db 61 CCTGCTCCAGGCCTCACTGTGCAACTGCTGCTGTCACTGCTGCTGTCCAT 120 CCCCAGAGGTTGCCCCGGATGCAGGAGGATTCCCCCTTGGGAGAGGAGGCTCTTCTGGGAAA 180 Db 121 CCCCAGAGGTTGCCCCGGATGCAGGAGGAGTTCCCCCTTGGGAGGAGGCTCTTCTGGGAA 180 Db 121 CCCCAGAGGTTGCCCCGGATGCAGGAGGAGTTCCCCCTTGGGAGAGAGGAGGAT 180 CCCCAGAGGTTGCCCCGGATGCAGGAGGATTCCCCCTTGGGAGAGAGA

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                                 CLASSITACATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/260,190
PILING DATE: 15-UN-1994
ATTORNEY/AGENT INFORMATION:
NAME: LAUGER, Leona L.
REGISTRATION NUMBER: D-0021.3G
REFERENCE/DOCKET NUMBER: D-0021.3G
RELEPHONE: 415-435-2034
TELEPHONE: 415-435-2034
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1522 base pairs
TYPE: nucleic acid
STRANDENNESS: single
TODOLOGY: linear
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Patent No. 6093548
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APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
ADDRESSEE: Leona L. Lauder
STREET: G Mariposa Court
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       TOPOLOGY: 1i
MOLECULE TYPE:
HYPOTHETICAL:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
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CITY: Tiburon
Califor
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Best Local Similarity
Matches 1522; Conserv
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RESULT 8
US-08-485-049D-1
US-08-485-049D-1
Sequence 1, Application US/08485049D
Patent No. 6204370
Patent No
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: PATENTA: PC-DOS/MS-DOS
SOTTWARE: PATENTA: PC-DOS/MS-DOS
SOTTWARE: PATENTA: PC-DOS/MS-DOS
SOTTWARE: PATENTA: PC-DOS/MS-DOS
COMPUTER: US/08/485,049D
FILING DATE: 07-UN-1995
CLASSIFICATION UNMBER: US/08/485,049D
FILING DATE: 15-UN-1994
ATTORNEY/ACENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3E
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Leona L. Lauder
STREET: 369 Pine Street
                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 369 Pine St. CITY: San Francisco STATE: California COUNTRY: USA
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TELEPAX: 415-981-0332
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1522 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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Best Local Sim:
Matches 1522;
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HYPOTHETICAL: N
ANTI-SENSE: NO
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                                                                     ACCGCCTTTGCCAGAGTTGACGAGGCCTTGGGGGCGCCCGGGAGGCCTGGCCGTGTTGGCC 840
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Pred. No. 0;
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Sequence 1, Application US/09178115
Patent No. 6297041
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorekova, Jaromir
TITLE OF INVENTION: MN Gene and Protein
FILE REFERENCE: D-0021-5A.
CURRENT FILING DATE: 1998-10-23
CURRENT FILING DATE: 1998-10-23
EARLIER APPLICATION NUMBER: 09/177,776
EARLIER FILING DATE: 1997-01-24
EARLIER APPLICATION NUMBER: 08/787,739
EARLIER APPLICATION NUMBER: 08/485,049
EARLIER APPLICATION NUMBER: 08/485,049
EARLIER APPLICATION NUMBER: 08/485,049
EARLIER APPLICATION NUMBER: 08/487,756
EARLIER APPLICATION NUMBER: 08/487,756
EARLIER FILING DATE: 1995-06-07
EARLIER APPLICATION NUMBER: 08/477,504
EARLIER APPLICATION NUMBER: 08/477,504
EARLIER APPLICATION NUMBER: 08/477,504
EARLIER APPLICATION NUMBER: 08/481,658
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; ORGANISM: HUMAN
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (13)...(1389)
; FEATURE:
; NAME/KEY: mat_peptide
; LOCATION: (124)...(1389)
US-09-178-115-1
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EARLIER FILING DATE: 1995-06-07
EARLIER APPLICATION NUMBER: 08/485,863
EARLIER APPLICATION NUMBER: 08/487,077
EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1995-06-07
EARLIER APPLICATION NUMBER: 08/260,190
EARLIER APPLICATION NUMBER: 08/177,093
EARLIER FILING DATE: 1993-12-30
EARLIER FILING DATE: 1993-12-30
EARLIER FILING DATE: 1993-12-30
EARLIER FILING DATE: 1993-12-30
EARLIER FILING DATE: 1992-03-12
EARLIER FILING DATE: 1992-03-11
EARLIER APPLICATION NUMBER: DV-709-92
EARLIER FILING DATE: 1992-03-11
NUMBER: OF SEQ ID NOS: 116
SOFTWARE: Patentin Vet. 2.0
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Best Local Similarity 100.0%; P
Matches 1522; Conservative 0;
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   AACAATGGCCACAGTGTGCAACTGACCCTGCCTCCTGGGCTAGAGATGGCTCTGGGTCCC
                                           CTGCGCCCCTGGAACTCCTGGGCTTCCAGCTCCCGCCGCTCCCAGAACTGCGCCTGCGC
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RESULT 10
US-09-177-776-1
VSequence 1, Application US/09177776
Patent No. 6297051
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Pr
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TYPE: DNA
ORGANISM: HUMAN
FEATURE:
NAME/KEY: CDS
LOCATION: (13)...(1389)
FEATURE:
NAME/KEY: mat_peptide
LOCATION: (124)...(1389)
US-09-177-776-1
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CUURRENT FILING DATE: 1998-10-23
EARLIER APPLICATION NUMBER: 08/797,776A
CUURRENT FILING DATE: 1998-10-23
EARLIER APPLICATION NUMBER: 08/485,049
EARLIER APPLICATION NUMBER: 08/485,049
EARLIER APPLICATION NUMBER: 08/486,756
EARLIER FILING DATE: 1995-06-07
EARLIER APPLICATION NUMBER: 08/481,564
EARLIER APPLICATION NUMBER: 08/477,504
EARLIER APPLICATION NUMBER: 08/477,504
EARLIER APPLICATION NUMBER: 08/481,658
EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1995-06-07
EARLIER APPLICATION NUMBER: 08/485,863
EARLIER APPLICATION NUMBER: 08/487,077
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EARLIER APPLICATION NUMBER: 08/177,093
EARLIER APPLICATION NUMBER: 08/177,093
EARLIER APPLICATION NUMBER: 07/964,589
EARLIER APPLICATION NUMBER: 07/964,589
EARLIER FILING DATE: 1992-03-11
NUMBER: 08 SEQ ID NOS: 116
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APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: Methods to Detect and Qua:
TITLE OF INVENTION: Wethods to Detect and Detect and Price Fill REFERENCE: D-0021A
CURRENT APPLICATION NUMBER: US/08/335,469A
CURRENT FILING DATE: 1994-11-07
EARLIER APPLICATION NUMBER: 07/964,589
EARLIER FILING DATE: 1992-10-21
NUMBER OF SEQ ID NOS: 4
SOPTWARE: Patentin Ver. 2.0
SEQ ID NO 1
LENGTH: 1399
TYPE: DNA
ORGANISM: Human
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US-08-335-469-1
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Patent No. 6004535
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Best Local Similarity 100.0%;
Matches 1399; Conservative (
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NAME/KEY: CDS
LOCATION: (1)..(1266)
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 CGGGAGTACCGGGCTCTGCAGCTGCATCTGCACTGGGGGGGCTGCAGGTCGTCCGGGCTCG
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0; Mismatches
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RESULT 12
US-07-964-589-1
                                                                                                                                                        Sequence 1, Application Patent No. 5387676 GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and PI
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Leona L. Lauder
STREET: Steuart Street Tower, 16
STREET: Plaza
CITY: San Francisco
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NAME: Lauder/Leona L
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-00
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-77-9257
TELEPAX: 415-543-4219
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1397 base pairs
TYPE: NUCLEIC ACID
STRANDEDNESS: single
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Best Local Simi
Matches 1392;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 94105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/964,589
FILING DATE: 19921021
CLASSIFICATION: 435
CLASSIFICATION: 435
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MOLECULE TYPE:
HYPOTHETICAL: N
ANTI-SENSE: NO
FEATURE:
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COUNTRY: US
ZIP: 94105
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LOCATION:
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                                                                                  GCGCCCCTGGAACTCCTGGGCTTCCAGCTCCCGCCGCTCCAGAACTGCGCCTGC-AGA
                                                                                                   GCGCCCCTGGAACTCCTGGGCTTCCAGCTCCCGCCCCCCAGAACTGCGCCTGCGCAA
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99.3%; Pred. No. 0;
tive 0; Mismatches
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RESULT 13
POT-US93-02024-1
; Sequence 1, Application PC/TUS9302024
; GENERAL INFORMATION:
; APPLICANT: CIBA Corning Diagnostics Corp.
; APPLICANT: INStitute of Virology
TITLE OF INVENTION: MN Gene and Protein
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Leona L. Lauder
; STREET: Steuart Street Tower, 18th Fl., On
; STREET: Plaza
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PCT-US93-02024-1
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INPORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1397 base pairs
TYPE: NUCLEIC ACID
STRANDENNESS: single
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Best Local Similarity
Matches 1392; Conserv
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN RELEASE #1.0, V
CURRENT APPLICATION DATA:
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MOLECULE TYPE:
HYPOTHETICAL: N
ANTI-SENSE: NO
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REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-777-9257
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/964,589
FILING DATE: 21-0CT-1992
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L
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APPLICATION NUMBER: CS PY
FILING DATE: 10-MAR-1992
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STATE: C
COUNTRY:
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ER: D-0021
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Pred. No. 0;
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RESULT 14 US-08-481-65 ; Sequence 5 ; Patent No. ; GENERAL 1	90 90 90 90	D	, 48 A B A	φ φ φ φ φ φ φ φ φ φ φ φ φ φ φ φ φ φ φ	D 09	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	5 B 8 B	Q Q DB
7 14 481-658B-5 Jence 5, Application US/08481658B ERAL INFORMATION:	1441 GGAGCCGGTAACTGTCCTGTCCTGCTCATTATGCCACTTCCTTTTAACTGCCAAGAAATT 1500	196 GGCAGCACAGAAGGGGAACCAAAGGGGGTGTGAGCCTACCCACCAGAGGGTAGCCGAG 125 381 ACTGGAGCCTAGAGGGCTGGATCTTGGAGAATGTGAGAAGCCAGCC	CGGGCTGCTGAGCCAGTCCAGCTGAATTCCTGCCTGGCTGCTGGTGACAT CGGGCTGCTGAGCCAGTCCAGCTGAATTCCCTGCCTGGTGACCAT GTTTTTGGCCTCTCTTTTTGCTGTCACCAGCGTTCCCTTCTTGTGCAGAT GTTTTTTGGCCTCCTTTTTTGCTGTCACCAGCGTCGCGTTCCTTGTGCAGAT GTTTTTTGGCCTCTCTTTTTGCTGTCACCAGCGTCGCGTTCCTTGTGCAGAT GTTTTTGGCCTCTCTTTTTGCTGTCACCAGCGTCGCGTTCCTTGTGCAGAT	200 ACACCCICIONACACCCIGINGGARCICICGGIACHCIGARCITICAGA 42 CGACGCAGCCTTTGAATGGCCGAGTGATTGAGGCCTCCTTCCCTGCTGGAGTGGACAGCA 5	CCCAGGGTGTCATCTGGACTGTGTTTTAACCAGACAGTGATGCTGAGTGCTAAGCAGCTCC 108	902 AAGAATTCGCTGAGGAAGCTTCAGAGACTCAGGTCCAGGACTGGACATATCTGCACTCC 961	657 CGCCTTTGCCAGAGTTGACGAGGCCTTGGGGGCGCCGGGAGGCCTTGGCCGTTTGGCCGC 715 843 CTTTCTGGAGGAGGGCCCGGAAGAAACAGTGTCCTATGAGCAGTTGCTGGTCTCGCTTGG 901	38 GCGGGAGTACC-GGCTCTGCAGCTGCACCGGGGCTGCAGGGCTCCAGGCCTC 59 13 GGGGAGCACACTGTGGAAGCCACCGTTTCCCTGCCGAGATCCACGTGGTTCACCTCAGCAC 78 14 1 1 1 1 1 1 1 1 1	
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TOPOLOGY: linear

MOLECULE TYPE: DNF

HYPOTHETICAL: NO

ANTI-SENS: NO
US-08-477-504A-5
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US-08-477-504A-5
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INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 10898 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC Compatible
COMPUTER: IEM PC Compatible
COMPUTER: SISTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,504A
FILING DATE: 07-UN-1995
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-UN-1994
ATTORNEY/AGENT INFORMATION:
NAME: LBUGGY LEGRAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 27.2%; Score 414.4; DB 2; Length 10898; Best Local Similarity 99.8%; Pred. No. 7.4e-94; Matches 415; Conservative 0; Mismatches 1; Indels 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-(
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-435-2034
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APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MV Gene and Protein
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
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6 Mariposa Court
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Search completed: March 7, 2004, 05:25:41 Job time: 100 secs

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Result
No.
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Maximum DB seq length: 200000000
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Perfect score:
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                                          1522
1517.4
1379.8
414.4
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Match
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13317.253 Million cell updates/sec
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    /cgn2_6/ptodata/1/pubpna
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Listing first 45 summaries
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/cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                      Length
                                            10898
                                                                            GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
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                      US-09-954-456-89
US-09-954-456-726
UUS-09-960-706-1080
UUS-09-873-367C-516
UUS-10-465-572-9
US-10-295-027-305
US-10-295-027-305
US-10-295-027-305
US-10-102-54-1695
US-10-102-54-1695
US-09-723-713-5
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US-09-967-237-1
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Sequence 1, Appli
Sequence 89, Appli
Sequence 89, Appl
Sequence 726, App
Sequence 516, App
Sequence 516, Appl
Sequence 9, Appli
Sequence 90, Appli
Sequence 1022, App
Sequence 1022, App
Sequence 1022, App
Sequence 1695, App
Sequence 5, Appli
Sequence 5, Appli
Sequence 2, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
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ALIGNMENTS

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US-09-772-719-1

SEQUENCE 1, Application US/09772719

SEQUENCE 1, Application US/09772719

Patent No. US202020337910A1

GENERAL INFORMATION:

APPLICANT: Pastorekova, Silvia

APPLICANT: Pastores:

CORRESPONDENCE ADDRESS:

AS9 Pine Street

CITY: San Francisco

STATE: California

COUNTRY: USA

ZIP: 994104

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER LEM PC Compatible

OPERATING SYSTEM: PC-DOS/MS-DCS

SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)

CURRENT APPLICATION NUMBER: US/09/772,719

FILING DATE: 30-JAN-2001

CLASSIFICATION NUMBER: US 08/485,049

FILING DATE: 15-JUN-1995

APPLICATION NUMBER: US 08/260,190

FILING DATE: 15-JUN-1995

APPLICATION NUMBER: US 08/260,190

FILING DATE: 15-JUN-1994

AFTORNEY/AGENT INFORMATION:

NAME: Lauder, Leona L.

REGISTRATION NUMBER: 30,863

REFERENCE/DOCKET NUMBER: 30,963

REFERENCE/DOCKET NUMBER: 30,963

TELEFONMUNICATION INFORMATION:

TELEFONMUNICATION INFORMATION:

TELEFAX: 415-981-0332
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INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 1522 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
S-09-772-719-1
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Best Local Similarity
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GCCTTTCTGGAGGAGGGCCCGGAAGAAAACAGTGCCCTATGAGCAGTTGCTGTCTCGCTTG
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Pred. No. 0;
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                                                                                                                                         Sequence 1, Application US/09967237

Publication No. US20030049828A1

GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
FILE REFERENCE: D-0021.5B-2

CURRENT FILING DATE: 2001-09-27

PRIOR APPLICATION NUMBER: US/09/967,237

CURRENT FILING DATE: 1998-10-23

NUMBER OF SEQ ID NOS: 116

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 1

LENGTH: 1522

TYPE: DNA

ORGANISM: HUMAN
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US-09-967-237-1
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661 GGGGGAGTACCGGGCTCTGCAGCTGCACTTGCACTGGGGGGGCTGCAGGTCTGGGCCTGGCCGGGCTTGGAGCTGCAGCTGGAGCTGCAGCTGGAGCTGCAGCTGGAGCTGCAGCTGGAGCTGCAGCTGGAGCTGCAGCTGGAGCTGCAGCTGGAGCTGCAGCTGCAGCTGCAGCTGCAGCTGCAGCTGCAGCTGCAGCTGCAGCTGCAGCTGCAGCTGCCAGGCCTGCCAGAGATCCACGTGGTTCACCTCAGCCTCAGCCTGCTGAGAAACCACCTGGTAGACACCTGGAGACCCAAGCTTCCACGCTGCCAGAGATCCACCGTGGTTCACCTCAGCCTGCTGAGAAACCACCTGGTTCACCTCAGCCTTTCCGAGAAACCACCTGGTAGACAAACCAGTTTCACCTCAGCCTTTGGCCAGAGTTGACAAAACAGTTGACCAGGAGCCTTGAGCAGAGCCTTGAGCAGAGCCTTTGAGCAGAGGCCTTTGAGCAGAGGCCTTTGAGCAGGAGGCCTTTTGAGCAGAGGCCTTTTTGAGCAGAGAGCCTTTTTGAGCAGAAAAAAAA	Db 421 GACCAGATCATTGGCGTATGGAGGCGACCCGGGTCGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCAGCCTGCCCAGCCTGCCCAGCCTGCCCAGCCTGCCCAGCCTGCCCAGCCTCCCAGCCTCCCAGCCTCCCAGCCTCCCAGCCCAGCCTTCTGCCCCGGCC 540 Db 481 GCGGGCCCCCTGGAACTCCTGGATATCCGCCCCAGCTCCCAGAACTGCCCCGGCC 540 Qy 541 CTGCGCCCCCTGGAACTCCTGGGCTTCCAGCTCCCAGAACTGCGCCTGCGC 600 Db 541 CTGCGCCCCTGGAACTCCTGGGCTTCCAGCTCCCAGAACTGCGCCTGCGC 600 Db 541 CTGCGCCCCTGGAACTCCTGGGCTTCCAGCTCCCAGAACTGCGCTTCTGGGCC 600 Db 601 AACAATGGCCACAGTGTGCAACTGACCTGCCTCCTGGGGTTAAAAATGGCTTCTGGGTTCC 660 Oy 601 AACAATGGCCACAGTGTGCAACTGACCTTCCTGCGTTAAAAAAAA	GATGACCCACTGGGCGAGGAGGATCTGCCCCAGTGAAGAGGATTCACCCCAGAGAGGAGGATTCACCCAGAGAGGAGGATTCACCCAGAGAGGAGGATTCACCCAGAGAGGAGGAGGATTCACCCAGAGAGGAGGATTCACCCAGAGGAGGATTCACCCGGAGAGGAGGATCTACCTGCCCAAGAGGAGGATCTACCTGAGAGGAGGATCTACCTGAGAGGAGGATCTACCTGTTTACCTGGAGAGGAGGATCTACCTTACCTGGAGAGGAGGATCTACCTTTACCTGGAGAGGAGGATCTACCTTTACCTGGAGAGGAGGATCTACCTTTTTAGAGGATCTAAGCCTAAATCAGAAGAAGAAGAAGAAGGAGGATCTACCTTTTAAGCCTAAATCAGAAGAAGAAGAGGGGCTCCCTGAAGTTAGAGGATCTACCTAC	Ouery Match Best Local Similarity 100.0%; Pred. No. 0; Best Local Similarity 100.0%; Pred. No. 0; Matches 1522; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Matches 1522; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Oy 1 ACAGTCAGCCGCATGGCTCCCCTGTGCCCCTGGCTCCTCTGTTGATCCCGGCC 60 I
PRIOR APPLICATION NUMBER: US/60/23,617 PRIOR PLILING DATE: 2000-09-18 PRIOR APPLICATION UNDEER: US/60/234,923 PRIOR FILING DATE: 2000-09-20 PRIOR APPLICATION UNDEER: US/60/234,923 PRIOR FILING DATE: 2000-09-25 PRIOR APPLICATION NUMBER: US/60/235,134 PRIOR PRIOR PLILING DATE: 2000-09-26 PRIOR PRIOR PLILING DATE: 2000-09-26 PRIOR PRILING DATE: 2000-09-26 PRIOR PRILING DATE: 2000-09-26 PRIOR PRILING DATE: 2000-09-26 PRIOR PRILING DATE: 2000-09-27 PRIOR APPLICATION NUMBER: US/60/235,711 PRIOR PRILING DATE: 2000-09-27 PRIOR PRICE PRILING DATE: 2000-09-27 PRIOR PRICE PRINCE PRINCE PRINCE PRINCE PRILING DATE: 2000-09-27 PRIOR PRILING DATE: 2000-09-27 PRIOR PRILING DATE: 2000-09-27 PRIOR PRILING DATE: 2000-09-27 PRIOR PRICE PRINCE PRI	RESULT 3 RESULT 3 US-09-954-456-89 US-09-954-56-89 IS-09-954-56-89 IS-09-954-56-89 IS-09-954-56-89 IS-09-954-56-89 IS-09-954-56-89 IS-09-954-56-89 IS-09-954-56 IS-09-954-56-89 IS-09-954-56		Oy 1021 GCCCAGGGTGTCATCTGGACTGTGTTTAACCAGACAGTGATGCTGAGTGCTAAGCAGCTC 1080 1021 GCCCAGGGTGTCATCTGGACTGTGTTTAACCAGACAGTGATGCTGAGTGCTAAGCAGCTC 1080 1021 GCCCAGGGTGTCATCTGGACTGTGTTTAACCAGACAGTGATGCTAAGCAGCTC 1080 1021 GCCCAGGGTGTCATCTGACACCCTGTGGGACTGCTGAGTGCTAAGCAGCTGAACTTCCGA 1140 Oy 1081 CACACCCTCTCTGACACCCTGTGGGGACCTGGTGACTCTCGGCTACAGCTGAACTTCCGA 1140 1081 CACACCCTCTCTGACACCCTGTGGGGACCTGGTGACACCTGAACTTCCGA 1140 Oy 1141 GCGACGCAGCCTTTGAATGGGCAGTGATTGAGGCCTCCTTCCCTGCTGGACTAGCAACC 1200 1141 GCGACGCAGCCTTTGAATGGGCGAGTGAATTCCTGCTTGCT

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CURRENT FILING DATE: 2001-09-18
PRIOR APPLICATION NUMBER: US/60/233,617
PRIOR APPLICATION NUMBER: US/60/234,052
PRIOR FILING DATE: 2000-09-20
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PRIOR APPLICATION NUMBER: US/60/235,720
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Sequence 1080, Application US/09960706

| Publication No. US20030134280A1 |
| GENERAL INFORMATION: USENTIAL SET INTEL OF INVENTION: Identifying Drugs for an TITLE OF INVENTION: Gene Expression Profile FILE REFERENCE: 44921-5029-01US |
| CURRENT APPLICATION NUMBER: US/09/960,706 |
| CURRENT FILING DATE: 2001-09-24 |
| PRIOR APPLICATION NUMBER: 60/223,323 |
| PRIOR APPLICATION NUMBER: 60/223,323 |
| PRIOR APPLICATION NUMBER: 60/223,323 |
| PRIOR FILING DATE: 2001-06-05 |
| NUMBER: OF SEQ ID NOS: 1124 |
| SOFFWARE: PATENTIAL Ver. 2.1 |
| SEQ ID NO 1080 |
| LENGTH: 1552 |
| TYPE: DNA ORGANIGN: Homo sapiens |
| FEATURE: PATENTON: Genbank Accession No. US US-09-960-706-1080 |
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Best Local Sim
Matches 1522;
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APPLICANT: Ebner, Reinhard
APPLICANT: Ebner, Reinhard
ITILE OF INVENTION: Cancer Gene Determination and
ITILE OF INVENTION: Signature Gene Sets
FILE REFERENCE: 689290-64
CURRENT APPLICATION NUMBER: US.00/9/873,367C
CURRENT FILING DATE: 2003-04-29
PRIOR APPLICATION NUMBER: U.S. 60/236,891
PRIOR APPLICATION NUMBER: U.S. 60/236,842
PRIOR APPLICATION NUMBER: U.S. 60/244,867
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Matches 1522
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RESULT 7

US-10-301-822-11

Sequence 11, Application US/10301822

Sequence 11, Application US/10301821

Sequence 11, Application VS 20030148410A1

GENERAL INFORMATION:

APPLICANT: Millennium Pharmaceuticals, Inc.

APPLICANT: Berger, Allison

APPLICANT: Guillemette, Tracy L.

APPLICANT: Schlegel, Robert

APPLICANT: Schlegel, Robert

APPLICANT: Monahan, John E.

TITLE OF INVENTION: MOTHEL GENES, COMPOSITIONS, KITS, AND TITLE OF INVENTION: MOTHEL SENSES, COMPOSITION, ASSESSMENT, PRE'

TITLE OF INVENTION: MOTHEL GENES, COMPOSITION, ASSESSMENT, PRE'

TITLE OF INVENTION: MOTHEL GENES, COMPOSITION, ASSESSMENT, PRE'

TITLE OF INVENTION: MOTHEL SENSES, COMPOSITION, ASSESSMENT, PRE'

TITLE OF INVENTION: MOTHEL SOLO CANCER

FILL REFERENCE: MPMO1-02-92-RNM

CURRENT FILING DATE: 2002-11-21

PRIOR APPLICATION NUMBER: US 60/339,971

PRIOR APPLICATION NUMBER: US 60/361,978

PRIOR APPLICATION NUMBER: US 60/361,978

PRIOR APPLICATION NUMBER: US 60/361,978

PRIOR FILING DATE: 2002-03-05

PRIOR FILING DATE: 2002-03-05

PRIOR FILING DATE: 2002-05-20

NUMBER OF SEQ ID NOS: 228

SOFTWARE: FeatEBEQ for Windows Version 4.0

SEQ ID NO 11

SEQ ID NO 11

SEQ ID NO 11

SEQ ID NO 12

COCATION: (43)...(1422)

US-10-301-822-11
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Publication No. US20030207840A1

GENERAL INFORMATION:
APPLICANT: Riggins, Gregory
APPLICANT: Riggins, Gregory
TITLE OF INVENTION: GENES INDUCED BY HYPOXIA
FILE REFERENCE: 000250.00012
CURRENT APPLICATION NUMBER: US/10/465,572
CURRENT APPLICATION NUMBER: US/10/201,642
PRIOR APPLICATION NUMBER: US/10/201,642
PRIOR FILING DATE: 2002-07-24
PRIOR FILING DATE: 2001-07-26
NUMBER OF SEQ ID NOS: 30
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 9
LENGTH: 1552
TYPE: DNA
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Applicant Watton, Susan R.

Applicant Eof INVENTION Methods of Diagnosis of Cancer, Compositions and Title Of INVENTION Wethods of Screening for Modulators of Current Title Of INVENTION Wethods of Screening for Modulators of Cancer CURRENT Application NUMBER: US/10/295,027

CURRENT Application NUMBER: US/10/295,027

CURRENT Application NUMBER: US/000-99-15

PRIOR Application NUMBER: US 60/350,666

PRIOR FILING DATE: 2001-11-13

PRIOR APPLICATION NUMBER: US 60/350,464

PRIOR FILING DATE: 2001-11-29

PRIOR APPLICATION NUMBER: US 60/332,464

PRIOR FILING DATE: 2001-11-29

PRIOR APPLICATION NUMBER: US 60/334,393

PRIOR APPLICATION NUMBER: US 60/347,211

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PRIOR APP
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NUMBER OF SEQ ID NOS: 1386
SOFTWARE: PatentIN Ver. 2.1
SEQ ID NO 305
LENGTH: 1552
TYPE: DNA
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Publication No. US2003022350A1

Publication No. US2003022350A1

APPLICANT: Har, Daniel
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APPLICANT: Hevezi, Peter A.
APPLICANT: Watton, Susan R.
APPLICANT: Watton, Susan R.
APPLICANT: Watton, Susan R.
APPLICANT: Howelds of Diagnosis of Cancer, Compositions and TITLE OF INVENTION: Methods of Screening for Modulators of CURRENT FILING DATE: 2002-11-13

CURRENT APPLICATION NUMBER: US/10/295,027

CURRENT APPLICATION NUMBER: US/00/95,027

CURRENT FILING DATE: 2001-11-13

PRIOR APPLICATION NUMBER: US 60/35,733

REIOR FILING DATE: 2001-11-15

PRIOR APPLICATION NUMBER: US 60/35,394

PRIOR APPLICATION NUMBER: US 60/33,394

PRIOR APPLICATION NUMBER: US 60/33,394

PRIOR APPLICATION NUMBER: US 60/33,394

PRIOR APPLICATION NUMBER: US 60/34,393

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PRIOR APPLICATION NUMBER: US 60/34,376

PRIOR APPLICAT
Remaining Prior Application data removed - NYMABER OF SEQ ID NOS: 1386 SOFTWARE: PatentIN Ver. 2.1 SEQ ID NO 1022 LENGTH: 1552 TYPE: DNA GRAANISM: Homo sapiens US-10-295-027-1022
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Query Match 100.0%; Score 1522; Best Local Similarity 100.0%; Pred. No. 0; Matches 1522; Conservative 0; Mismatches

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RESULT 11

US-10-102-524-1695

Sequence 1695, Application US/10102524

Publication No. US20030109434A1

GENERAL INFORMATION:

APPLICANT: Algate, Paul A.

APPLICANT: Mannion, Jane

APPLICANT: Gaiger, Alexander

APPLICANT: Gordon, Brian

ITLE OF INVENTION: COMPOSITIONS AND METHODS FOR

TITLE OF INVENTION: THERAPY AND DIAGNOSIS OF KI

FILE REFERENCE: 210121.572

CURRENT APPLICATION NUMBER: US/10/102,524

CURRENT FILING DATE: 2002-03-19

NUMBER OF SEQ ID NOS: 1863

SOFTMARE: FastSEQ for Windows Version 4.0

SEQ ID NO 1695

LENGTH: 1519

ORGANISM: Homo sapiens

US-10-102-524-1695
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S В Ś 밁 , B 8 Š Query Match 99.7%; Best Local Similarity 99.9%; Matches 1518; Conservative 121 124 184 61 64 GCTCCAGGCCTCACTGTGCAACTGCTGCTGCTGCTGCTTCTGATGCCTGCTGCTCCATCCC GTCAGCCGCATGGCTCTCTGTTGCCCCAGCCCTGGCTCTCTTTGATCCCGGCCCCT GTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCCCCT GACCCACTGGGCGAGGAGGATCTGCCCCAGTGAAGAGGATTCACCCCAGAGAGGAGGATCCA CAGAGGTTGCCCCGATGCAGGAGGATTCCCCCTTGGGAGGAGGCTCTTCTGGGGAAGAT GCTCCAGGCCTCACTGTGCAACTGCTGCTGTTCACTGCTTCTGATGCCTGTTCCATCCC Score 1517.4; pred. No. 0; 0; Mismatches DB ۲, Length 1519; Gaps 120 60 243 180 183 123

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196 GAGGAGGATCTGCCCAGTGAAGAGGATTCACCCAGAGAGAG	atch 90.7%; Score 1379.8; DB 9; Length 1833; 2381; Conservative 99.9%; Pred. No. 0; 1381; Conservative 0; Mismatches 2; Indels 0; Gaps 16 GCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCCCCTGCTCCAGGCCTC 75 16	US-09-783-708-2 US-09-783-708-2 Sequence 2, Application US/09783708 Patent No. US20020058041A1 GENERAL INFORMATION: APPLICANT: The Regents of the University of California APPLICANT: The Regents Of the University of California TITLE OF INVENTION: KIDNEY-SPECIFIC TUMOR VACCINE DIRECTED AGAINST KIDNEY TUMOR PILLE REFERENCE: 306T-897420US CURRENT APPLICATION NUMBER: US/09/783,708 CURRENT FILING DATE: 2001-02-13 PRIOR APPLICATION NUMBER: 60/182,429 PRIOR APPLICATION NUMBER: 60/182,429 PRIOR APPLICATION NUMBER: 60/182,636 PRIOR FILING DATE: 2000-02-14 PRIOR FILING DATE: 2000-02-15 NUMBER OF SEQ ID NOS: 22 SOFTWARE: Patentin version 3.0 SEQ ID NO 2 LENGTH: 1833 TYPE: DNA ORGANISM: Artificial Sequence FEATURE: TUMORWATION: Nucleic acid encoding G250-GM-CSF fusion protein with His tag US-09-783-708-2	1444 GCCGGTAACTGTCCTGCTCATTATGCCACTTCCTTTAACTGCAAAGAAATTTTT 1500 1441 GCCGGTAACTGTCCTGCTCATTATGCCACTTCCTTTAACTGCAAAGAAATTTTT 1500 1504 TAAAATAATATTTATAAT 1522	

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MCLECULE TYPE:
HYPOTHETICAL: NO
ANTI-SENSE: NO
US-09-772-719-5
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Patent No. US20022137910A1
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Pr
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSEE: Leona L. Lauder
STREET: 369 Pine Street
CITY: San Francisco
STATE: California
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APPLICATION NUMBER: U$/09/772,719
FILING DATE: 30-JAN-2001
CLASSIFICATION NUMBER: U$/09/772,719
FILING DATE: 30-JAN-2001
PRIOR APPLICATION DATA:
APPLICATION NUMBER: U$ 08/485,049
FILING DATE: 07-JUN-1995
APPLICATION NUMBER: U$ 08/260,190
FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: LAUGHER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3E
REGISTRATION INFORMATION:
TELEPAX: 415-981-2034
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Best Local Similarity
Matches 415; Conserv
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
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Pred. No. 9.3e-112;
0; Mismatches 1;
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APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
FILE REFERENCE: D-0021.5B-2
CURRENT FILING DATE: 2001-09-27
PRIOR APPLICATION NUMBER: 09/178,115
PRIOR APPLICATION NUMBER: 09/178,115
PRIOR FILING DATE: 1998-10-23
NUMBER OF SEQ ID NOS: 116
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 5
LENGTH: 10898
TYPE: DNA
TYPE: DNA
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LOCATION: (1)..(10898)
LOCATION: (1)..(10898)
OTHER INFORMATION: full-length MN genomic sequence
NAME/KEY: unsure of base at position 1974
LOCATION: (1974)
TOCATION: (1974)
OTHER INFORMATION: unsure of base at position 1974, which is in the 5' re
OTHER INFORMATION: transcription initiation site (3507) as determined by
US-09-967-237-5
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US-09-967-237-5
                 RESULT 15
US-09-772-719-28
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Sequence 28, Application US/09772719
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Pred. No. 9.3e-112;
0; Mismatches 1;
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; DESCRIPTION: 1

; HYPOTHETICAL: NO

; ANTI-SENSE: NO

US-09-772-719-28
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FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-UN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
NAME: LAUDER: 30,863
REGISTRATION NUMBER: D-0021.3E
REFERENCE/DOCKET NUMBER: D-0021.3E
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-981-2034
TELEPHONE: 415-981-2034
INFORMATION FOR SEQ ID NO: 28:
SEQUENCE CLARACTERISTICS:
LENGTH: 415 base pairs
TELEGIST: 415 base pairs
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APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Pr
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
ADDRESSE: Leona L. Lauder
STREET: 369 Pine Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No. US20020137910A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0:
FILING DATE: 07-UN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 415 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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STATE: California
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     414; Conservative
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Pred. No. 4.8e-112;
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0	Search	Дb	9	Ф
000 ctme : 444 pecp	completed	361 G#	361 G	301 G#
0	Search completed: March 7, 2004, 06:33:57	GGCTCCTGG	GGCTCCTGG	AGTTAAGCC
	7, 2004,	AGATCCTCA	AGATCCTCA	TAAATCAGA
	06:33:57	361 GAGGCTCCTGGAGATCCTCAAGAACCCCAGAATAATGCCCACAGGGACAAAGAAG 415	361 GAGGCTCCTGGAGATCCTCAAGAACCCCAGAATAATGCCCACAGGGACAAAGAAG 415	301 GAAGTTAAGCCTAAATCAGAAGAAGAGGGCTCCCTGAAGTTAGAGGATCTACCTAC
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Result
No.
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Maximum Match 100%
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AL542336 Homo sapiens PLACENTA Homo sapiens cDNA clone CSODE010YB19

AL542336 Homo sapiens PLACENTA Homo sapiens cDNA clone CSODE010YB19

AL542336 AL542336 GI:30547384

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SOURCE

ORGANISM Homo sapiens (human)

EXT.

REFERENCE

AUTHORS

Fill
Full-length cDNA libraries and normalization

Unpublished (2001)

Contact: Genoscope

Genoscope - Centre National de Sequencage

BP 191 91006 EVRY cedex - France

BP 191 91006 EVRY cedex - France

Expail: seqref@genoscope.cns.fr/

Cgi-bin/cluster.cgi?seq=CSODE010CA10QP2&cluster=8734.f. Contact:
Feng Liang Email: fliang@lifetech.com URL:

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ttch 60.5%; Score 920.8; 18 9; Length 1201; al Similarity 96.4%; Pred. No. 1.8e-194; 991; Conservative 13; Mismatches 15; Indels 9; Gaps 6;	AL554705 AL554705 Homo sapiens PLACENTA COT 25-NORMALIZED Hom clone CSODIO85YF18 5-PRIME, mRNA sequence. AL554705 AL554705 AL554705 AL554705 AL554705 AL564705 AL5647	781 ACCGCCTTTGCCAGAGTTGACGAGGCCTTGGGGGGCCCGGGAGGCCTGGCCGTGTTGGCC 840

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Genoscope - Centre National de Sequencage
Genoscope - Centre National de Sequencage
Bp 191 91006 ENRY cedex - France
Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Linvitrogen. This sequence belongs to sequence cluster 5300.f For
more information about this cluster, see
http://www.genoscope.cns.fr/
cgi-bin/cluster.gqi?seqcCS1DA001ZF09QP1&cluster=5300.f. Contact:
Feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ Invitrogen Corporation 1600
Faraday Avenue Genoscope sequence ID: CS1DA001ZF09QP1.
Location/Qualifiers
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Mammalia; Eutheria; Primates; Catarrhini; Hor
1 (bases 1 to 1013)
Li, Manual Comber, C., Jessee, J. and Polayes, D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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/db_xref="taxon:9606"
/dlone="CSDDA003YB12"
/tissue_type="NEUROBLASTOMA"
/clone lib="Homo sapiens NEUROBLASTOMA"
/note="Vector: pCMVSPORT 5; 1st strand cDNA was primed /note="Vector: pCMVSPORT 5; 1st strand cDNA was primed double-strand cDNA was digested with Not I and cloned the Not I and EcoRV sites of the pCMVSPORT 6 vector.
Library was not normalized."
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33; Mismatches 19;
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1 (Dases 1 to 1072)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
On Feb 15, 2001 this sequence version replaced gi
Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
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AL558378.2 G
                                                                                         http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSODOJOSBF07QP1&cluster=5300.f. Conta
Feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CSODJ005BF07QP1.
                                                                                                                                                                    Email: segref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 5300.f For
more information about this cluster, see
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                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
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/clone="CSODJ005YK14"
                                                                Location/Qualifiers
1. .1072
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873 780 813 720 753 660

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/note="Ist strand cDNA was primed with a NotI-oligo (dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR viets of the pCMVSPORT 6 vector. Library was normalized /cell_type="T CELLS (JURKAT CELL LINE)
/cell_line="JURKAT"
/clone_lib="Homo sapiens T CELLS (JURK)
10-NORWALIZED" (JURKAT ទ CELL 10-NORMALIZED LINE) COT

Similarity 99.: 56; Conservative 59.4%; 4. Score 903.4; DB 9; Pred. No. 1.3e-190; 4; Mismatches 0; Indels Length ຫ ••

ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCC cerecrecaegeereaerecaacrecrecrecrecrecrecrecrecrearecere CCTGCTCCAGGCCTCACTGTGCAACTGCTGCTGCTGCTGCTTCTGATGCCTGTCCAT ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCTGGCTCCCTCTGTTGATCCCGGCC 120 60 213 153

GAGGCTCCTGGAGATCCTCAAGAAACCCCCAGAATAATGCCCCACAGGGACAAAGAAGAAGGGGAT CCACCCGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCT GATGACCCACTGGGCGAGGAGGATCTGCCCAGTGAAGAGGATTCACCCAGAGAGGAGGATGACT CCCCAGAGGTTGCCCCGGATGCAGGAGGATTCCCCCCTTGGGAGGAGGAGGCTCTTCTGGGAA 180 GAGGCTCCTGGAGATCCTCAAGAACCCCAGAATAATGCCCACAGGGACAAAGAAGGACGGAT CCACCCGGAGAGGATCTACCTGGAGAGGATCTACCTGGAGAGGAGGATCTACCT GATGACCCACTGGGCGAGGAGCATCTGCCCAGTGAAGAGGATTCACCCAGAGAGGGGGGGT CCCCAGAGGTTGCCCCGGATGCAGGAGGATTCCCCCTTGGGAGGAGGCTCTTCTGGGGAA 513 420 453 360 393 300 333 240 273

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1 (bases 1 to 1201)

11,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization

Unpublished (2001)

On Feb 15, 2001 this sequence version replaced gi:12895665.

Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSOD1085DC09NP1&cluster=5300.f. Contact
cgi-bin/cluster.cgi?seq=CSOD1085DC09NP1&cluster=5300.f. Contact
feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CSODI085DC09NP1.
Location/Qualifiers
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BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 5300.f
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AL554665 1201 bp mRNA linear ES AL554665 Homo sapiens PLACENTA COT 25-NORWALIZED Homo clone CS0DI085YF18 3-PRIME, mRNA sequence.
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/clone_Tib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/clone_Tist strand cDNA was primed with a NotI-oligo(dT)
/note="Ist strand cDNA was primed with a NotI only cDNA was
primer. Five prime end enriched, double-strand cDNA was
digested with NotI and cloned into the NotI and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODI085YF18"
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Pred. No. 4.6e-182;
3: Mismatches 47;
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Eukaryota; Metazoa;
Mammalia; Eutheria;
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Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 5300.f For
more information about this cluster, see
http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSODK009DH05QP1&cluster=5300.f. Contact
Feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CSODK009DH05QP1.
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
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BP 191 91006 EVRY cedex - France
Email: segref@genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 5300.f
more information about this cluster, see
http://www.genoscope.cns.fr/
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization

Unpublished (2001)

Contact: Genoscope
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Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 5300.f
more information about this cluster, see
http://www.genoscope.cns.fr/
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/mol type="mRNA"
/db_xref="taxon:9606"
/clone="CSODX007YK10"
/cell_type="HELA CELLS CO'
/cell_line="HELA"
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Ungublished (2001)

On Feb 16, 2001 this sequence version replaced giconscope - Centre National de Sequencage

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AL580216 AL580216.2 GI:31318495
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                                                                                             Email: seqref@genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 5300.f For
more information about this cluster, see
http://www.genoscope.cns.fr/
cgi-bin/cluster.gi?eeq=CSODJ005BF07NP1&cluster=5300.f. Contact
Feng Liang Email: fliang@nifetech.com URL:
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CSODJ005BF07NP1.
Location/Qualifiers
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       /organism="Homo sapiens"
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              (JURKAT
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/note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized.
                                                                                                            /cell_line="JURKAT"
/clone_lib="Homo sa;
10-NORMALIZED"
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Score 789.4; DB.9; Pred. No. 3.5e-165; 4; Mismatches 66; Length 1017; Indels 4

GCCCCTGGAACTCCTGGGCTTCCAGCTCCCGCCGCCTCCCAGAACTGCGCCTGCGCAAACA GAGCACACTGTGGAAAGGCCACCGTTTCCCTGCCGAGATCCACGTGGTTCACCTCAGCACC ATGGCCACAGTGTGCAACTGACCCTGCCT-CCTGGGCTAGAGATGGCTCTGGGTCCCGGG écececergaaerecrées - - frecas receécecececada a crécecerececada éca CGGGAKTACYGGGCTCTGCAGCTGCATCTGCACTGGGGGGGCTCCAGGTCGGGCTCG CGGGAGTACCGGGCTCTGCAGCTGCATCTGCACTGGGGGGCTGCAGGTCGTCCGGGCTCG <u> Aredeceae agrerio da acceride con econo e en agada recercio en recese e</u> Gaps 783 723 826 663 988 604 766 ω

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http://www.genoscope.cns.fr/
ogi-bin/cluster.ogi?seqc.CSODX007BF05QP1&cluster=5300.f. Contact
ogi-bin/cluster.ogi?seqc.CSODX007BF05QP1&cluster=5300.f. Contact
Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
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Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 5300.f
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length CDNA libraries and normalization Unpublished (2001)
On Feb 15, 2001 this sequence version replaced
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1. (bases 1 to 1067)
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/mol type="mrNA"
/db xref="texon:9606"
/clone="CSODK007YK10"
/cell type="HELA"
/cell type="HELA"
/cell type="HELA"
/clone_lib="Homo sapiens HELA CELLS COT 25-NORWALIZED"
/clone_lib="Homo sapiens HELA CELLS COT 25-NORWALIZED"
/note="1st strand cDNA was primed with a NotI-clig(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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5; Mismatches 2
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Mammalia; Eutheria; Primates; Catar
1 (bases 1 to 874)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mamm
Umpublished (199)
Contact: Robert Strausberg, Ph.D.
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BG386425
BG386425.1 GI:
EST.
                                                                                            Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

cDNA Library Preparation: Ling Hong/Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: NIH Intramural Sequencing Center

Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLCM1308 row: h column: 14

High quality sequence stop: 714.
Location/Qualifiers
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602455652F1 NIH_MGC_15 Homo sapiens
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/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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Query Match
Best Local Similarity
Matches 822; Conserv
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                                           TAC-TICCAATATGAGGGGTCT-CIGACTACACCGCCCTGTGCCCAGGGTGTCATCTGGA 1039
                                                                                             GAATCCAGGGCCCAAGGACTGGACATTÁTCTTGGAÁTCTTGACCTTCTGÁCTTCÁAGCGG
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/tissue_type="adenocarcinoma cell line"
/lab_host="DH10B (phage-resistant)"
/clone lib="NIH MGC_15"
/clone lib="NIH MGC_15"
/clone lib="NIH MGC_15"
/clone lib="CDNA made by oligo-dr priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)"
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Pred. No. 2.9e-152;
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Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: James Martin
CDNA Library Preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be obtained
from Dr. M. Bento Soares, bento-soares@uiowa.edu
The following repetitive elements were found in this cDNA
sequence: 1-42, ART rich#Low_complexity (matched compliment)
Seq primer: M13 FORWARD
POLYA=Yes.
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1 (bases 1 to 689)

NGI-GGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Canger Institute, Cancer Genome Anatomy Project (CGAP);
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UT-H-FE1-beg-j-10-0-UI.S1 NCI CGAP_FE1 Homo sapiens cDNA clone
UI-H-FE1-beg-j-10-0-UI 3', mRNA sequence.
CA425935
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                                                 GGAGGAGGGCCCGGAAGAAAACAGTGCCTATGAGCAGTTGCTGTCTCGCTTGGAAGAAAT
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/ clone libe "NGI (CGAP FEI"
/ note="Organ: Chondrosarcoma; Vector: pT713-Pac
/ note="Organ: Chondrosarcoma; Vector: pT713-Pac
(pharmacia) with a modified polylinker; Site_1: EcoR I;
Site_2: Not I; NGI (GAP FEI is a normalized cDNA library
derived from a pool of mRNA obtained from 3 cell lines
from grade II chondrosarcoma tissues. The library was
constructed according to Bonaldo, Lennon and Soares,
Genome Research, 6:791-806, 1996. Firet strand CDNA
synthesis was primed with an oligo-dT primer containing a
Not I site. Double stranded cDNA was ligated to an EcoR I
adaptor, digested with Not I, and cloned directionally
into pT713-Pac vector. The oligonucleotide used to prime
the synthesis of first-strand cDNA contains a library tag
sequence that is located between the Not I site and the
(dT) 18 tail. The sequence tag for this library is
CGCTACGGAC. The cell lines were provided by Dr James
Martin from the University of Iowa.
TAG_INSUB-Human grade 2 chondrosarcoma cell line pool
TAG_LIB-UI-H-FEI
TAG_SEG-CGCTACGGAC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="UI-H-F31-beg-j-10-0-UI"

/tissue_type="Cell lines"

/dev_stage="Adult"

/lab_host="DH10B_(Life_Technologies)"
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Contact: Robert Strausberg, Ph.D.

Email: cgapbs-Yemail.nih.gov

Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.

Emmert-Buck, M.D., Ph.D.

cDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center

Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:

www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                      Homo sapiens (human)
Homo sapiens
Eukaryota, Merazoa, Chordata,
Mammalia, Eutheria, Primates,
                                                                                                                                                                                 Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                             Mammalia, Eutheria, Primates, Catarrhini, Hom
1 (bases 1 to 682)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anat
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Seq primer: -40UP from Gibco
High quality sequence stop: 4
Location/Qualifiers
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                                      CCGGTAACTGTCCTGCTCCTCATTATGCCACTTCCTTTTAACTGCCAAGAAATTTTTTT
                                                                                                    AGCACAGAAGGGGAACCAAAGGGGGTGTGAGCTACCGCCCAGCAGAGGTAGCCGAGACTG
                                                                                                                                                                                                                                                 TGGTTTTTGGCCTCCTTTTTGCTGTCACCAGCGTCGCGTTCCTTGTGCAGATGAGAAGGC
                                                                                                                                                                                                                                                                                                                                                                                         CGCAGCCTTTGAATGGGCGAGTGATTGAGGCCTCCTTCCCTGGTGGAGTGGACAGCAGTC
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                                                                                                                                                                                                                                                                                           Conservative
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/clone lib="NCI CGAP Lu19"
/note="Organ: lung; "Gector: pT7T3D-Pac (pharmacia) with a modified polylinker; lst strand cDNA was prepared from pooled lung tumor tissue, and was then primed with a Not I oligo(dT) primer. Double-stranded cDNA was ligated to core adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization. Library constructed by Bento Soares and M. Fatima Bonaldo. "
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/tissue_type="squamous cell carcinoma, poot
/tissue_type="squamous cell carcinoma, poot
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:2405329"
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98.8%;
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Pred. No. 1.1e-137;
0; Mismatches 8;
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REFERENCE
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Best Local Similarity
Matches 734; Conserv
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BX383092 Homo sapiens T CELLS (JURKAT CELL LINE) COT 10-NORWALIZED
Homo sapiens cDNA clone CSODJ005YG10 5-PRIME, mRNA sequence.
BX383092
BX383092.1 GI:30449113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSDDJ005BD05QP1&cluster=5300.f. Contact
Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODJ005BD05QP1.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                           \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: segref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 5300.f For
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genoscope - Centre National de Se
BP 191 91006 EVRY cedex - France
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria;
1 (bases 1 to 1074)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                           ACAGTCAGCCGCATGGCTCCCCTGTGCCCCAGCCCCTGGCTCCCTCTGTTGATCCCGGCC
                                                                                                                 GATGACCCACTGGGCGAGGAGGATCTGCCCCAGTGAAGAGGATTCACCCAGAGAGGAGGAT 240
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    CCACCCGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCT
                                                                             Conservative
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/db xrof="taxon:9606"
/clone="CSDDJ005YG10"
/cell_type="T CELLS (JURKAT CELL LINE) COT 10-NORMALIZED"
/cell_line="JURKAT"
/cell_line="JURKAT"
/clone_lib="Homo sapiens T CELLS (JURKAT CELL LINE) COT
/clone_lib="Homo sapiens T CELLS (JURKAT CELL LINE) COT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                       43.7%;
93.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                 Score 665.4; DB 13; Length 1074.
Pred. No. 1.7e-137;
4; Mismatches 6; Indels 34;
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                                                                                                                                                          Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Email: cgapbs romail.nih.gov
Tissue Procurement: James Martin
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
cDNA Sequencing by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be obtained
from Dr. M. Bento Soares, bento-soares@uiowa.edu
The following repetitive elements were found in this cDNA
sequence: 1-45, AT rich#Low_complexity (matched compliment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BU620600 691 bp mRNA linear UI-H-FL1-bfx-o-01-0-UI.s1 NCI CGAP_FL1 Homo sapiens UI-H-FL1-bfx-o-01-0-UI 3', mRNA sequence.
BU620600 GI:23286815
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

1 (bases 1 to 691)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                        NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGCTCCTGGAGATCCTCAAGAACCCCAGAATAATGCCCACAGGGACAAAGAAGGAGGGAT
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                                                                                                                                               primer: M13 FORWARD
        /organism="Homo sapiens"
/mol type="mRNA"
/db xref="reaxon:9606"
/clone="UI-H-FL1-bfx-o-01-0-UI"
                                                                                                      Location/Qualifiers
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cDNA clone EST 23-SEP-2002

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	1508	AACTGTCCTGTCCTGCTCATTATGCCACTTCCTTTTAACTGCCAAGAAATTTTTTAA	Ş
	93	152 CTAGAGGCTGGATCTTGGAGAATGTGAGAAGCCAGCCAGAGGCATCTGAGGGGGAGCCGG	Дb
	1448	1389 CTAGAGGCTGGATCTTGGAGAGAGTGTGAGAGAGGCCAGCCA	Ş
	153	212 CAGAAGGGGAACCAAAGGGGGTGTGAGCTACCGCCCAGCAGAGGTAGCCGAGACTGGAGC	Вb
	1388	gaaggggaaccaaagggggrergagcraccgcccagcagaggragc	Ş
	213	272 TTTTGGCCTCCTTTTTGCTGTCACCAGCGTCCCTTGTGCAGATGAGAAGGCAGCA	망
	1328	1269 TTTTGGCCTCCTTTTTGCTGTCACCAGCGTCGCGTTCCTTGTGCAGATGAGAAGGCAGCA	γQ
	273	1209 GGCTGAGCCAGTCCAGCTGAATTCCTGCTGGCTGGTGGTGACATCCTAGCCCTGGT	유 성
	332	391 GCCTTTGAATGGCCAGTGATTGAGGCCTCCTTCCCTGCTGGAGTGGACAGCAGTCCTCG	망
	1208	1149 GCCTTTGAATGGGCGAGTGATTGAGGCCTCCTTCCCTGGAGTGGACAGCAGTCCTCG	Qy
	392	451 CTCTGACACCCTGTGGGGACCTGGTGACTCTCGGCTACAGCTGAACTTCCGAGGGACGCA	βDb
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	908	949 GGAGGAGGCCCCGGAAGAAACAGTGCCTATGAGCAGTTGCTGTCTCGCTTGGAAGAAA	ટ્ટ
	ļ.,	Query Match 43.4%; Score 660.4; DB 13; Length 691; Best Local Similarity 99.7%; Pred. No. 1.8e-136; Matches 672; Conservative 0; Mismatches 1; Indels 1; Gaps	¥ # 5
		IN	ORIG
	Le Se Le Constitue de Constitue	Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT773-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this library is GAGGTCGGTG. The cell lines were provided by Dr. James Martin from the University of Iowa. TAG TISSUB=Human Chondrosarcoma Grade 3 cell line mix TAG_LIB-UI-H-FL1 TAG SEGAGCTCGTG"	
٠	A.	/ CLOHE LIBE NAT CORRESAND VECTOR: pT7T3-Pac / note Torgan: (Chondrosarcoma, Vector: pT7T3-Pac / (Pharmacia) with a modified polylinker; Site 1: EcoR Site 2: Not I; NCI CGAP Fill is a normalized cDNA libra drived from a pool of mRNA obtained from 4 cell lines derived from grade III chondrosarcoma tissues. The library was from grade III chondrosarcoma tissues. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA Genome Research	
		/tissue_type="Cell lines" /dev_stage="Adult" /lab_host="HH108 (Life_Technologies)"	

B 5 1509 TAAATATTTATAAT 1522 |||||||||||| | 32 TAAATATTTATAAT 19

Search completed: March 7, 2004, 05:23:47 Job time: 2834 secs

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Result
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Maximum Match 100%
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1: geneseqp1990s:*
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(c) 1993 - 2004 Compugen Ltd.
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AAY53228
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AAB03018
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Abp9774 Amino aci
Abu56656 Lung canc
Abu56408 Lung canc
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Aab03005
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ALIGNMENTS

AAR88058;

25-MAR-2003 25-JUL-1996

(revised) (first entry)

Protein encdoed by MuTu putative oncogene MN

AAR88058 standard; protein; 459 AA.

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/note= "intracellular C-terminus"
/note= "anti-MN antibody epitope"
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/note= "intracellular transmembrane
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te= "anti-MN antibody epitope"
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07-JUN-1995;
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07-JUN-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence is encoded by the full length MuTu endogenous cellular component, MN, cDNA clone, which was isolated from lymphocytic choriomeningitis virus (LCMV) infected hela cells. Persistent LCMV, the exogenous MuTu transmissible agent (MX), infection increases the expression level of the MN gene. MN is a putative oncogene, and can therefore be used in the development of prods. For the diagnosis and treatment of neoplastic (NP), or pre-NP diseases. NP diseases can be treated using DNA antisense to MN transcribed mRNA, anti-MN protein antibodies can be used for the diagnosis NP or pre-NP diseases and a vaccine contg. immunogenic amounts of the MN protein can be used to immunise a vertebrate against a NP disease associated with MN antigen expression. (Updated on 25-MAR-2003 to correct PR field.)
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(VIRO-)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 459 AA;
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   GLLFAVTSVAFLVQMRRQHRRGTKGGVSYRPAEVAETGA 459
                                                                                                                      EEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLS
                                                                                                                                                                             VEGHRFPAEIHVVHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIA 300
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                                DTLWGPGDSRLQLNFRATQPLNGRVIEASFPAGVDSSPRAABPVQLNSCLAAGDILALVF
                                                           DTLWGPGDSRLQLNFRATQPLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVF
                                                                                                                                                         VEGHRÉPAETHVVHLSTAFARVDEALGRÉGGLAVLAAFLEEGFEENSAYEQLLSRLEETA
                                                                                             BEGSETOVPGLDISALLPSDFSRYFOYEGSLTTPPCAQGVIWTVFNOTVMLSAKQLHTLS
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100.0%; Pred. No. 1.1e-182;
trive 0; Mismatches 0;
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                                                        The present invention describes a method of screening for preneoplastic/neoplastic disease. The method comprises: (1) determining to whether abnormal MN gene expression is present in a vertebrate; and (2) if abnormal MN gene expression is determined to be present in the cif abnormal MN gene expression is determined to be present in the cif abnormal MN gene expression is determined to be present in the cif abnormal MN gene expression is determined to be present in the cif abnormal MN gene is an oncogene and the protein (also referred to as MN/CA IX isoenzyme). The MN cif as the cif as the complex cif as an oncogene and cif as the cif as a carbonic anhydrase isoenzyme. The method cif used for detecting a wide variety of preneoplastic/neoplastic diseases cif a vertebrate, preferably a human. The disease detected is mammary, complex to the cif as a complex cif and cif as a complex 
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07-JUN-1995;
07-JUN-1995;
07-JUN-1995;
07-JUN-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nucleic acid based assay for diagnosing a wide variety of preneoplastic/neoplastic disease comprises screening for abnormal MN gene expression in a vertebrate.
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                                                                                                                                                                                                                                                                              MN protein; tumour associated cell adhesion molecule; oncoprot proteoglycan domain; PG domain; carbonic anhydrase; CA domain; abnormal expression; neoplastic disease; cancer; gene therapy.
                                                                                                                                                                                                                                                                                                                            Human MN protein.
                                                         WPI; 2000-350752/30.
N-PSDB; AAA52459, AAA52462
                                                                                                                                                    23-OCT-1998;
23-OCT-1998;
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Comprises a proteogly-can-like (FG) domain (AABB3017) which contains the CP protein's binding site, and a carbonic anhydrase (CA) domain (AABB3018). Abnormal expression of the MN protein is associated with tumorigenicity. CP The invention encompasses molecules (e.g., proteins and peptides) which contains the CP which specifically bind to a site on the MN protein in a cell adhesion assay. It calso encompasses MN proteins or MN protein fragments which can be added to the extracellular environment to prevent the adhesion of vertebrate cells to each other. The invention also relates to the identification of the binding site of the MN protein and to a method of identifying a site of an an MN protein to which cells adhere, comprising testing a series of coverlapping peptides from the protein in a cell adhesion control sequence invention encompasses a vector comprising an expression control sequence coperatively linked to a nucleic acid encoding the variable domains of a cell mixer peptide (AABB3035) and the vector inhibits the growth of a cell adhesion assay. The constitution also encompasses a vector comprising a nucleic acid encoding the variable domains of a certebrate prencoplastic or neoplastic cell that abnormally expresses MN calcidence cell also claimed to the MN centebrate prencoplastic or neoplastic cell that binds to the MN centebrate prencoplastic or peptides, and peptides, and expression vectors encoding such proteins and peptides and peptides, and expression vectors encoding such proteins and peptides (e.g., cancers) associated with or characterised by abnormal MN protein compassed by abnormal MN protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to the inhibition of cell adhesion mediated b MN oncoprotein (also known as the MN/CA IX isoenzyme or the MN/C250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; Fig 1A-C; 154pp; English
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밁 Ś 밁 밁 8 밁 8 Ş 문 Ś 片 Š Ş Query Match Best Local S Matches 459 utch 100.0%; al Similarity 100.0%; 459; Conservative 0; 301 301 241 241 181 181 121 421 361 361 121 61 61 GEEDLPSEEDSPREEDPPGEEDLPGEEDLPGEEDLPEVKPKSEEEGSLKLEDLPTVEAPG MAPLCPSPWLPLLIPAPAPGLTVQLLLSLLLLMPVHPQRLPRMQEDSPLGGGSSGEDDPL MAPLCPSPWLPLLIPAPAPGLTVQLLLSLLLLMPVHPQRLPRMQEDSPLGGGSSGEDDPL ELLGFQLPPLPELRLRNNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGRPGSEHT DPQEPQNNAHRDKEGDDQSHWRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPL DPQEPQNNAHRDKEGDDQSHWRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPL 180 GEEDLPSEEDSPREEDPPGEEDLPGEEDLPGEEDLPEVKPKSEEEGSLKLEDLPTVEAPG GLLFAVTSVAFLVQMRRQHRRGTKGGVSYRPAEVAETGA VEGHRFPAEIHVVHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIA DTLWGPGDSRLQLNFRATOPLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVF <u>EEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLS</u> EBGSETOVPGLDISALLPSDFSRYFOYEGSLTTPPCAOGVIWTVFNOTVMLSAKOLHTLS VEGHREPAEIHVVHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIA Score 2424; Pred. No. 1.1 0; Mismatches DB 3; .1e-182; 0 Indels Length 0 Gaps 300 120 120 300 240 180 60 360 240

A molecule which specifically binds to a site on MN protein (oncoprotein) and prevents adhesion of vertebrate cells to the protein, useful for treating preneoplastic or neoplastic diseases such as cancer.

RESULT 4 AAE17175

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                                                                                                                                                                                                                                                                                                                                                                                                                                      The patent discloses peptides which can be used to elicit an immune response against a tumour, specifically against an immunogenic tumour. The peptides are derived from the amino acid sequence of renal cell carcinoma (RCC) associated antigen, G250 protein. They are used in immunotherapy of tumours, in particular renal cell carcinomas. Sequences of the invention are useful in preparing a composition for the treatment of cancer, including renal cell carcinoma, cancer of the kidney, head, prostate, neck, stomach, colon, gastrointestinal tract and bladder. They are also used for treating immunogenic tumours. Nucleic acid sequences encoding the peptides of the invention are used in gene therapy. The present sequence is human RCC-associated antigen, G250 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New peptides useful in preparing a composition for the treatment of cancer, including renal cell carcinoma, cancer of the kidney, prostate, head, neck, or gastrointestinal tract, and in eliciting immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; immune response; immunogenic tumour; renal cell carcinoma; RCC-associated antigen; G250 protein; immunotherapy; gene therapy
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immunostimulant.
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Pred. No. 1.1e-182;
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The present invention describes an isolated nucleic acid molecule, which comprises the sequence of any of the genes that are up-regulated or down-cregulated in specific cancers (e.g. about 1031 genes up-regulated in cacute lymphocytic leukemia). ACC72641 to ACC72860 represent cancer crelated gene nucleotide sequences which encode the proteins given in CC ABRSB521 to ABRSB709. Also described: (1) determining the presence or cabsence of a pathological cell in a patient; (2) an expression vector cc comprising a nucleic acid molecule described above; (3) a host cell comprising the vector; (4) an isolated polypeptide, which is encoded by the nucleic acid; (5) an antibody that specifically binds the polypeptide of (4); (6) specifically targeting a compound to a pathological cell in a patient by administering to the patient the antibody above; and (7) a cc patient by administering to the patient the antibody above; and (7) a cc diagnosing a pathology, e.g. cancer (e.g. cancer of the bone marrow, cc bladder, brain, breast, cervix, colon/rectum, kidney, lung, ovary, atherosclerosis and endometriosis. The nucleic acid is also useful in cc darg screening, particularly for identifying agents for treating these

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ARRESULT 5 
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20-SEP-2001; 2001US-0323887P.
13-NOV-2001; 2001US-0350666P.
08-FEB-2002; 2002US-0355145P.
08-FEB-2002; 2002US-0355257P.
12-APR-2002; 2002US-0372246P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New genes that are up-regulated or down-regulated in cancers, useful markers for diagnosing e.g. cancer, ischemia or heart diseases, or as therapeutic targets for screening drugs for treating these diseases.
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N-PSDB; ACC72730.
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heart disease;
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atherosclerosis; endometriosis.
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WPI; 2003-239423/23.
N-PSDB; ABZ77284.
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                                                                    Riggins GJ,
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24-JUL-2002;
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Pred. No. 1.1e-182
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                                                                                                                                                         Inhibiting angiogenesis for treating wound healing, retinopathy, ischemia, inflammation, microvasculopathy, bone healing, skin inflammation or follicular development by providing to a subject
                                                                                                                                                  antisense polynucleotide.
                                                                                                                                                            skin
u subject
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Claim 4; Page 47-48; 66pp; English

The present sequence is a human CA9 polypeptide. It is used in the meth of the invention. The specification describes a method modulating angiogenesis associated with wound healing, retinopathy, ischemia, inflammation, microvasculopathy, bone healing, skin inflammation or follicular development. The method comprises providing to a subject HOG: HOG18, CA9, HXB, IGFBP5, HFARP, STC1, mig-6 or SSR4. The methods, antisense polymucleotides, polypeptides and antibodies are useful for treating wound healing, retinopathy, ischemia, inflammation, microvasculopathy, bone healing, skin inflammation or follicular development, or cancer such as breast, colon or lung cancer, or clichlasterm development, glioblastoma method HOG3,

Sequence 459 AA;

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Query Match
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Matches 459
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                 GLLFAVTSVAFLVQMRRQHRRGTKGGVSYRFAEVAETGA
                                                             DTLWGPGDSRLQLNFRATQPLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVF
                                                                                   DTLWGPGDSRLQLNFRATQPLNGRVIEAS FPAGVDSS PRAAEPVQLNSCLAAGDILALVF
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ABU56656 standard; protein; 459 æ

ABU56656;

02-APR-2003 (first entry)

Lung cancer-associated polypeptide #249

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                                                                                                                                                                                                                                                                                                                                    The invention relates to a method for detecting a lung cancer-associated CC transcript in a cell from a patient, comprising contacting a biological sample from the patient with a polynucleotide that selectively hybridises to a sequence that is at least 80 % identical to a gene that exhibits CC increased or decreased expression in lung cancer samples. Lung cancer-associated polynucleotides and polypeptides are used for identifying a compound that modulates a lung cancer-associated polypeptide, for cancer in a patient and for treating an example laving lung cancer by administering a modulatory compound identified. The methods are useful for treating lung cancer, non-small cell lung cancer or other benign or precancerous lesions, e.g. atelectasis, emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis, hypersensitivity pneumonitis, interstitial pulmonary disease, fibrosis, hypersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and bronchiectasis. The genes, polynucleotides and polypeptides are useful for diagnostic purposes and as targets for screening for therapeutic compounds that modulate lung cancer, such as antibodies. Sequences
                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 459
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10-MAY-2001; 2001US-0290492P.
09-NOV-2001; 2001US-0339245P.
13-NOV-2001; 2001US-0350666P.
29-NOV-2001; 2001US-0334370P.
12-APR-2002; 2002US-0372246P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Detecting a lung cancer-associated transcript in a cell from a patfor treating lung cancer, by contacting a biological sample from patient with a polynucleotide that exhibits increased or decrease expression in lung cancer.
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ELLGFQLPPLPELRLRNNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGRPGSEHT
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Pred. No. 1.1e-182;
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10-MAY-2001;
09-NOV-2001;
13-NOV-2001;
29-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                     Detecting a lung cancer-associated transcript in a cell from a patient for treating lung cancer, by contacting a biological sample from the patient with a polynucleotide that exhibits increased or decreased expression in lung cancer.
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The invention relates to a method for detecting a lung cancer-associated transcript in a cell from a patient, comprising contacting a biological sample from the patient with a polynucleotide that selectively hybridises to a sequence that is at least 80 % identical to a gene that exhibits increased or decreased expression in lung cancer samples. Lung cancer-associated polynucleotides and polypeptides are used for identifying a compound that modulates a lung cancer-associated polypeptide, for inhibiting proliferation of a lung cancer-associated polypeptide, for cancer in a patient and for treating a mammal having lung cancer by administering a modulatory compound identified. The methods are useful for treating lung cancer, such as small cell lung cancer, non-small cell

Claim 27; Page 189; 453pp; English.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lung cancer or other benign or precancerous lesions, e.g. atelectasis, emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis, hypersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and bronchiectasis. The genes, polynucleotides and polypeptides are useful for diagnostic purposes and as targets for screening for therapeutic compounds that modulate lung cancer, such as antibodies. Sequences ABU56408-ABU56745 represent lung cancer-associated polypeptides of the
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                                                                                                          The present sequence is that of a fusion protein composed of the G250 kidney cancer specific antigen attached via a dipeptide linker to human granulocyte macrophage colony stimulating factor (GM-CSF), plus a C-terminal hexahistidine tag. The fusion protein can be obtained by recombinant expression, e.g. in insect Sf8 cells, using a fusion construct (see AH/26551) obtained from human G250 and GM-CSF cDNAs. The fusion protein can be used to raise an immune response directed against renal cell cancers. It is used as a vaccine or in adoptive immunotherapy. Nucleic acids encoding the fusion protein can be used as DNA vaccines, to transfect cells in an adoptive immunotherapy treatment regimen, and in gene therapy for treating or preventing renal cell cancers
                                                                                                                                                                                                                                                                                                       New construct with a G250 kidney cancer specific antigen attached granulocyte macrophage colony simulating factor, useful in gene the or as a vaccine for treating renal cell cancers.
                                                                                       Sequence 610 AA;
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The present invention describes a method of screening for preneoplastic/neoplastic disease. The method comprises: (1) determining the whether abnormal MN gene expression is present in a vertebrate; and (2) if abnormal MN gene expression is determined to be present in the correct of abnormal MN gene expression is determined to be present in the correct of the present in the correct of the correct of the present in the correct of the present of the prese
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07-JUN-1995;
07-JUN-1995;
07-JUN-1995;
07-JUN-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic acid based assay for diagnosing a wide variety of preneoplastic/neoplastic disease comprises screening for the presence of abnormal MN gene expression in a vertebrate.
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30-DEC-1993;
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95US-00485049.
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94US-00260190.
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Sequence 377

Disclosure; Page 137-138; 154pp; English

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Best Local Sim
Matches 377;
                                          A molecule which specifically binds to a site on MN protein (oncoprotein) and prevents adhesion of vertebrate cells to the protein, useful for treating preneoplastic or neoplastic diseases such as cancer.
                                                                                            WPI; 2000-350752/30
                                                                                                                                                                              23-OCT-1998;
23-OCT-1998;
                                                                                                                                                                                                                                                                                                                   MN protein; tumour associated cell adhesion molecule; oncoprotein; proteoglycan domain; PG domain; carbonic anhydrase; CA domain; abnormal expression; neoplastic disease; cancer; gene therapy.
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(VIRO-) INST VIROLOGY
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98US-00178115.
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Pred. No. 6.9e-150;
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RESULT 12
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Best Local (
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                                                                                     standard; protein;
                                                                                                                                                                                                                        PRAAEPVQLNSCLAAGD 414
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                                                                                     429
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KLMPKSEEEGSLKLEDLPTVEAPGDPQEPQNNAHRDKEGDDQSHWRYGGDPPGPGCPQPA 119

EVKPKSEEEGSLKLEDLPTVEAPGDPQEPQNNAHRDKEGDDQSHWRYGGDPPWP-----

QRLPRMQEDSPLEEALLGKMTHWARRICPVKRIHPERRIHP-

ERRIYLERRIYLERRIYL

59

OLI PRINCEDS PI GGGSS GEODPI GEEDLP SEEDS PREEDPP GEEDLP GEEDL-P

Query Match Best Local Sim Matches 300;

Similarity

57.7%;

Score 1398.5; DB 2 Pred. No. 8.7e-102; 2; Mismatches 83;

Length

39,

429

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This sequence is encoded by the intronless MN gene which is a cellular CC gene which is the endogenous component of the MaTu agent. MaTu is a novel guasi-viral agent with rather unusual properties. It is presumably CC derived from a human mammary tumour. In some aspects it resembles CC classical viruses, whereas in other respects it resembles "slow" viruses (prions), and in still other aspects it is different from both classes of CC viruses. MaTu is a two component sytem. One part of the complex, CC exogenous MX, is transmissible, and is manifest by a protein, p58X, which is a cytoplasmic antigen which reacts with some natural sera, of humans CC and of various animals. The other component, MN, is endogenous to human CC ells. MN is a cellular gene showing very little homology with known DNA CC sequences. It is rather conservative and present as a single copy in the CC twin protein p54/58N, that is localised on the cell surface and in the CC twin protein p54/58N, that is localised on the cell surface and in the CC (MAD M75) revels two bands at 54 kD and 58 kD. These two bands may CC correspond to one type of protein that differs by glycosylation pattern CC orrelated with tumourigenicity. MN products can be used in can be used consistic disease. MN polypeptides, produced recombinantly by in consistic disease. MN polypeptides, produced recombinantly by in consistic part of inducing protective immunitity against neoplastic disease and CC carrect PN field.)
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21-OCT-1992;
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and/or pre-neoplastic disease.
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92US-00964589.
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30-DEC-1993;
15-JUN-1994;
07-JUN-1995;
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                                                        Nucleic acid based assay for diagnosing a wide variety of preneoplastic/neoplastic disease comprises screening for abnormal MN gene expression in a vertebrate.
                                                                                                                                                                                                                                                                                                                                                               Human; MN protein; MN gene; oncogene; carbonic anhydrase; tumour; oncogenesis; diagnosis; neoplastic disease; cancer; carcinoma; MN/CA IX isoenzyme.
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100.0%; Pred. No. 7.8e-100;
tive 0; Mismatches 0;
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23-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MN protein; tumour associated cell adhesion molecule; oncoprotein; proteoglycan domain; PG domain; carbonic anhydrase; CA domain; abnormal expression; neoplastic disease; cancer; gene therapy.
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The present invention describes a method of screening for preneoplastic/neoplastic disease. The method comprises: (1) determining whether abnormal MN gene expression is present in a vertebrate; and (2)

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RESULT 15
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Best Local Similarity
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07-JUN-1995,
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                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 12; -; 102pp; English.
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(VIRO-)
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STAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEETAEEGSETQVPGLDISA
                                                      RNNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGRPGSEHTVEGHRFPAEIHVVHL
                                                                                                                             DDQSHWRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRL
                                                                                               DDQSHWRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLBLLGFQLPPLPBLRL
                                     RNNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGRPGSEHTVEGHRFPAEIHVVHL
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(first entry)
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95US-00477504.
95US-00481658.
95US-00485049.
95US-00485862.
95US-00486756.
95US-004877077.
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                                                                                                                                                         Score 1364; DB 2; Pred. No. 2.3e-99; 0; Mismatches 0;
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                                    120
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Db 181 LLPSDFSNYFQYEGSLTTPPCAQCYIMTVFNQTVMLSAKQLHTLSDTLWGPGDSKLQLNF 375 Db 181 LLPSDFSNYFQYEGSLTTPPCAQCYIMTVFNQTVMLSAKQLHTLSDTLWGPGDSKLQLNF 240 Qy 376 RATQPLNGRVIEASFP 391 Db 241 RATQPLNGRVIEASFP 256 Search completed: March 5, 2004, 09:04:10 Job time: 61 secs	Search Job -tim	DЬ	8	DЪ	Ş
ODSRLQIMF 375	completed: March 5, 2004, 09:04:10 e : 61 secs	241 RATOPLNGRVIBASEP 256	376 RATOPLNGRVIBASFP 391	181 LLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSRLQLNF 240	316 LLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSRLQLNF 375

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Listing first 45 summaries
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       Score
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seq length: 2000000000
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2424
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       GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
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protein FS4D8.4 [i	carbonic anhydrase	carbonic anhydrase		hypothetical prote	~	hypothetical prote	carbonate dehydrat	protein-tyrosine-p	protein-tyrosine-p	protein-tyrosine-p	5	п	protein-tyrosine-p	carbonate dehydrat	d-arrent chrostme.

ALIGNMENTS

p54/58N - human C;Species Homo sapiers (man) C;Species Homo sapiers (man) C;Species Homo sapiers C;Species Homo sa							***		
Species: Homes sapiens (man) Species: Homes sapiens (man) Date: 17-May-1996 #sequence_revision 17-May-1996 #text_change 05-Nov-1999 Date: 17-May-1996 #sequence_revision 17-May-1996 #text_change 05-Nov-1999 Date: 17-May-1996 #sequence_revision 17-May-1996 #text_change 05-Nov-1999 Date: 17-May-1996 #sequence_revision 05 kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization of kM, a human tumor-associated protein file: Cloning and characterization file: Cloning and characteriz	п O	п O	п о	п о		п О	по		
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rt F w	DTLWGPGDSRLQLNFRATOPLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVF	EEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLS 3	VEGHRFPAEIHVVHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQILSRLEEIA	ELLGFQLPPLPELRLRNNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGRPGSEHT 2	DPQEPQNNAHRDKEGDDQSHWRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPL 	GEEDLPSEEDSPREEDPPGEEDLPGEEDLPGEEDLPEVKPKSEEEGSLKLEDLPTVEAPG 1	MAPICESDWIFILIFAPAPGLTVQLILSILILMPVHPQRIFRMQEDSPLGGGSSGEDDPL	Match 100.0%; Score 2424; DB 2; Length 459; Local Similarity 100.0%; Pred. No. 4.1e-147; Score 2459; Conservative 0; Mismatches 0; Indels 0; Gaps	- human ss; Homo sapiens (man) 17-May-1996 #sequence_revision 17-May-1996 #text_change 05-Nov-1999 sion; I38013 sion; I38013 2877-2888, 1994 Cloning and characterization of MN, a human tumor-associated protein wite none number; I38013; MUID:94386734; PMID:8084592 sion; I38013 si preliminary; translated from GB/EMBL/DDBJ lie type; mRNA les; 1-459 «RES» references; EMBL:X66839; NID:g1000701; PIDN:CAA47315.1; PID:g1000702 MCSUM MCS

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C;Superfamily: ca
C;Keywords: carbo
F;6-261/Domain: c
A;Molecule type: protein
A;Residues: 15,'8',17-36,'X',38-39 <FER:
C;Genetics:
                                                          A; Molecule type: mRNA
A; Residues: 1-319 < JNA
A; Cross-references: EMBL: x96503; NID: g1526571; PIDN: CAA65357.1;
A; Cross-references: EmbL: x96503; NID: g1526571; PIDN: CAA65357.1;
A; Experimental source: submaxillary gland
R; Fernley, R.T.; Darling, P.; Aldred, P.; Wright, R.D.; Coghlan,
Biochem. J. 259, 91-96, 1989
Biochem. J. 259, 91-96, 1989
A; Title: Tissue and species distribution of the secreted carboni
A; Reference number: S03862; MUID: 89246331; PMID: 2497732
A; A; Accession: S03862; MUID: 89246331; PMID: 2497732
                                                                                                                                                                                                                                                                                                                                                                                      carbonate dehydratase (EC 4.2.1.1) isoform VI precursor - N,Alternate names: carbonic anhydrase VI C;Species: Bos primigenius taurus (cattle) C;Date: 29-Jan-1998 #sequence revision 06-Feb-1998 #text_C;Accession: $71877; 803862
                                                                                                                                                                                                                                                                                              R; Jiang, W.; Woitach, J.T.; Gupta, D.
Biochem. J. 318, 291-296, 1996
A;Tille: Sequence of bovine carbonic anhydrase VI: potes
A;Reference number: S71877; MUID:96358528; PMID:8761494
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R;Fernley, R.T.; Wright, R.D.; Coghlan, J.P.
Biochemistry 27: 815-2820, 1988
A;Title: Complete amino acid sequence of ovine salivary
A;Reference number: A29993; MUID:88294021; PMID:3135834
A;Accession: A29993
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C;Species: Ovis orientalis aries, Ovis
C;Date: 15-Dec-1988 #sequence_revision
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Best Local Similarity
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A;Description: catalyzes the reversible dissociation of carbonic acid to carbon diox A;Note: this form is expressed in salivary, parotid, and submandibular glands; it is C;Superfamily: carbonate dehydratase; carbonic anhydrase homology C;Keywords: carbon-oxygen lyase; glycoprotein; hydro-lysse; metalloprotein; pyroglut F;1-17/Domain: signal sequence #status predicted <SIG>F;18-306/Product: carbonate dehydratase VI #status predicted <MAT>F;33-276/Domain: carbonic anhydrase homology <CAH>F;33-276/Domain: carbonic anhydrase homology <CAH>F;18/Modified site: pyrrolidone carboxyllc acid (Gln) (in mature form) #status predicted F;42-224/Disulfide bonds: #status predicted F;42-224/Disulfide bonds: #status predicted F;111,113,138/Binding site: carbohydrate (Asn) (covalent) #status predicted F;111,113,138/Binding site: zinc (His) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biochemistry 30, 569-575, 1991
A;Title: Human secreted carbonic anhydrase: A;Reference number: A37917; MUID:91105141; FA;Mocession: A37917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-308 < ALD:
A; Cross-references: GB:M57892; GB:J05305
A; Experimental source: salivary gland
A; Note: the authors translated the codon GAG
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                                                                                                                                                                                                                                                                                                                                                         A;Gene: GDB:CA6
A;Cross-references: GDB:125350; OMIM:114780
A;Map position: 1p36-1p36
C;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      carbonate dehydratase (EC 4.2.1.1) VI N;Alternate names: carbonic anhydrase C;Species: Homo sapiens (man)
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C;Function:
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08; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NNGHTVQISLPSSMRMTTSDGSQYLAKQMHFHWGGDSSEISGSEHTVDGMRYIIEIHVVH
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Pred. No. 1.8e-25;
0; Mismatches 97;
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VI; salivary carbonic anhydrase;
  492; DB 1;
No. 2.8e-24;
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Similarity

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RESULT 6
JN0576
carbonate
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C;Superfamily: carbonate dehydratase; carbonic anhydrase homology
F;30-290/Domain: carbonic anhydrase homology <CAH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       carbonate dehydratase-related protein - mouse N;Alternate names: carbonic anhydrase-related protein C;Species: Mus musculus (house mouse) C;Date: 18-Feb-1994 #sequence_revision 10-Nov-1995 #text_change C;Accession: S12867
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A; Residues: 1-303 < KAT>
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          dehydratase
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                                                                                                                      AGVDSSPRAAEPVQLN 407
                                                                                                                                                                                                                 IG-KEHVGLKAVTEILODIOYKGKSKTIPCFNPNTLLPDPLLRDYWVYEGSLTIPPCSEG
                                                                                                                                                                                                                                                                               LYEVRFHWGRENQRGSEHTVNFKAFPMELHLIHWNSTLFGSIDEAVGKPHGIAIIALFVQ
                                                                                                                                                                                                                                                                                                              ALQLHLHWGAAGREGSEHTVEGHREPAEIHVVHL-STAFARVDEALGREGGLAVLAAFLE 280
                                                                                                                                                                                                                                                                                                                                                                            QLAAFCPALRPLELIGFQLPP----LPELRLRNNGHSVQLTLPPGLEMALGP---GREYR 221
                                                                                                                                                                                                                                                                                                                                                                                                            MADLSFIEDAVAFPEKEEDEEEEEEGVE---WGYEEGVEWGLVFFDANGEYQSPINLNS
                                                                                                                                                                                                                                                                                                                                                                                                                                           LEDLPTVE-APGDPQEPQNNAHRDKEGDDQSHWRYGGDPPWPRVSPACAGRFQSPVDIRP
                                                                                                                                                  VTWILFRYPLTISOMOIEEFRRLRTHVKGVELVEGCDGILGDNFRPTOPLSDRVIRAAF-
                                                                                                                                                                                      VIWIVFNOTVMLSAKQL-----
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          (E)
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          4.2.1.1)
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Pred. No. 5e-20;
        VIII
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                                                                                                                                                                                -HTLSDTLWGPGDSRLQLNFRATQPLNGRVIEASFP 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119;
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A;Map position: 16q22.1-16q22.1
A;Introns: 14/1; 80/1; 119/3; 151/3; 172/3; 224/3
C;Function:
A;Description: catalyzes the reversible dissociation
A;Note: this form is expressed in salivary gland and
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carbonate dehydratase (EC 4.2.1.1) VII - human N;Alternate names: carbonic anhydrase VII C;Species: Homo sapiens (man) C;Date: 10-Peb-1995 #sequence_revision 05-May-1995 #text_chang C;Accession: A55272 R;Montgomery, J.C.; Venta, P.J.; Eddy, R.L.; Fukushima, Y.S.; Genomics 11, 835-848, 1991 A;Title: Characterization of the human gene for a newly discov A;Reference number: A55272, MUID:92147127; pMID:1783392 A;Accession: A55272
                                                                          A;Molecule type: DNA
A;Residues: 1-264 <MON>
A;Residues: 1-264 <MON>
A;Cross-references: GB:M76423; NID:g179964; PIDN:AAA51923.1; PID:g179967
A;Note: sequence extracted from NCBI backbone (NCBIN:80199, NCBIN:80201, C;Genetics:
A;Gene: GDB:CA7
A;Cross-references: GDB:119741; OMIM:114770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Description: catalyzes the reversible dissociation of carbonic ac A;Note: this protein has not been demonstrated to be enzymatically C;Superfamily: carbonate dehydratase; carbonic anhydrase homology C;Keywords: carbon-oxygen lyase; hydro-lyase; metalloprotein; zinc F;2-261/Product: carbonate dehydratase VIII #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N;Alternate names: carbonic anhydrase-related protein (CARP)
C;Species: Homo sapiens (man)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 21-Jul-2000
C;Accession: JNO576
R;Skaggs, L.A.; Bergenhem, N.C.H.; Venta, P.J.; Tashian, R.E.
Gene 126, 291-292; 1993
A;Title: The deduced amino acid sequence of human carbonic anhydrase-related A;Reference number: JNO576; MUID:93246262; pMID:8482548
A;Accession: JNO576
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A;Cross-references: GDB:141839; OMIM:114815
A;Map position: 8pter-8qter
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A;Residues: 1-290 <SKA>
A;Cross-references: GB:L04656;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              170 LAAFCPALRPLEILGFOLPP----LPELRLRNNGHSVOLTLPPGLEMALGP---GREYRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MADLSFIEDTVAFPEKEEDEEEEEEGVE---WGYEEGVEWGLVFPDANGEYQSPINLNSR
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                                                                                                                                                                                                                                                                                                                                                                                                                                   05-May-1995 #text_change 18-Jun-1999
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A;Molecule type: mRNA
A;Residues: 1-260 <PET>
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Mol. Evol. 44, 432-439, 1997
A;Title: Isolation and characterization of a carbonic anhydrase homologue from A;Reference number: Z16422; MUID:97250269; PMID:9089083
A;Accession: T08463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 carbonate dehydratase (EC 4.2.1.1) - zebra fish
C;Species: Brachydanio rerio (zebra fish)
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 13-Aug-1999
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Matches 95
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95; Conser
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ETPCCMVDNYRPPQPLKGRKVRASF
                                                                                                                                                    ELHLVHWNTKYPNFGEAASKPDGLAVVGVFLKIG-AANPRLQKVLDALDDIKSKGRQTTF
                                                                                                                                                                                       EIHVVHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQV
                                                                                                                                                                                                                               NGHSFQVDFVDDDNSSTLAGGPITGI-----YRLRQFHFHWGSSDDKGSEHTIAGTKFPC
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                                   PGDSRLQLNFRATQPLNGRVIEASF
                                                                         ANFOPKTLLPASLD-YWTYEGSLTTPPLLESVTWIVLKEPISVSPAQMAKFRSLLFSSEG
                                                                                                              PGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLW---G
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                                                                                                                                                                                                                                                                  -TLPPGLEMALGPGREYRALQLHLHWGAAGRPGSEHTVEGHRFPA
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                                                                                                                                                                                                                                                                                                                                                                                     Score 402.5; DB 2;
Pred. No. 1.1e-18;
7; Mismatches 108;
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Pred. No. 4.4e-19;
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A; Title: Independence genetique de deux formes de l'anhydrase carbonique A; Reference number: A90672; MUID:77242599; PMID:19093
A; Contents: annotation
A; Note: one minor and two major forms were isolated chromatographically. C; Superfamily: carbonate dehydratase; carbonic anhydrase homology C; Keywords: acetylated amino end; carbon-cyygen lyase; hydro-lyase; zinc F; 1/258/Domain: carbonic anhydrase homology <CAHP.
F; 1/Modified site: acetylated amino end (Ser) #status experimental F; 93,95,118/Binding site: zinc (His) #status predicted
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C;Species: B
C;Date: 31-M
C;Accession:
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A;Tille: Structure primaire de l'amhydrase A;Reference number: A90669; MUID:77065798;
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Best Local S
Matches 93
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                                       RLQLNFRATQPLNGRVIEASFP
LMLANWRPAQPLKNRQVR-GFP
                                                                                                                     ISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQL---HTLSDTLWGPGDS
                                                                                                                                                              VHWNTKYGDFGTAAQQPDGLAVVGVFLKVG-DANPALQKVLDALDSIKTKGKSTDFPNFD
                                                                                                                                                                                                   VHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEETAEEGSETQVPGLD
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                                                                                                                                                                                                                                                                                 NNGHSVQLTLPPGLEMAL---GP-GREYRALQLHLHWGAAGRPGSEHTVEGHRFPAEIHV
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                                                                                                                                                                                                                                                                                                                                                                                                           43; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                         Score 391; DB 1; Length 25
Pred. No. 6.1e-18;
13; Mismatches 110; Indels
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RESULT 10 CRMS2

NyAlternate names: carbonic anhydrase II
()Species: Mus musculius (house mouse)
C;Date: 25-Feb-1985 #sequence_revision 06-Feb-1995 #text_change
C;Accession: A23900; B23202; A01143; A20539; I51949
R;Venta, P.J.; Montgomery, J.C.; Hewett-Emmet, D.; Wiebauer, K.;
J. Biol. Chem. 260; 12130-12135, 1985
A;Title: Structure and exon to protein domain relationships of t
A;Reference number: A23900; MUID:86008276; PMID:2995362
A;Accession: A23900 A; Molecule type: DNA A; Residues: 1-260 < VEN> carbonate dehydratase (EC 4.2.1.1) II - mouse N;Alternate names: carbonic anhydrase II

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Tashian,

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mouse carbonic

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18-Jun-1999

A/Experimental source: strain YBR R; Venta, P.J.; Montgomery, C.; Hewett-Emmett, E Biochim. Biophys. Acta 826, 195-201, 1985 A;Title: Comparison of the 5' regions of human A;Reference number: A90655; MUID:86077780; PMII A;Accession: B23202 carbonic anhydrase Ħ genes

D.; Tashian,

R.E.

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C;Species: Homo sapiens (man)
C;Date: 07-May-1981 #sequence revision 05-May-1995 #text change 15-Sep-2000
C;Accession: A27175; A23202; Ā92194; A92147; I37214; I51863; I51871; A01141
R;Murakami, H.; Marelich, G.P.; Grubb, J.H.; Kyle, J.W.; Sly, W.S.
Genomics 1, 159-166, 1987
A;Title: Cloning, expression, and sequence homologies of cDNA for human carl A;Reference number: A27175; MUID:88085190; pMID:3121496
A;Accession: A27175
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A. Molecule type: mRNA
A. Molecule type: mRNA
A. Molecule type: mRNA
A. Residues: 155-178;214-240 <CU2>
R. Venta, P. U.; Montgomery, J.C.; Wiebauer, K.; Hewett-Emmett, D.
R. N. Y. Acad. Sci. 429, 309-323, 1984
A. Title: Organization of the mouse and human carbonic anhydrase
A. Title: Organization of the mouse and human carbonic anhydrase
                                                                                                                                                                                                            carbonate dehydratase (EC 4.2.1.1) II [validated] - human
N.Alternate names: carbonic anhydrase II; hepatic carbonic anhydrase
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: mRNA
A;Residues: 241-260 <RES>
A;Cross-references: GB:M25944; NID:g199078; PIDN:AAA39505.1;
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A;Title: The nucleotide sequence and derived amino acid sequence of cDNA coding A;Reference number: A01143; MUID:84109569; PMID:6420240
A;Accession: A01143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: Car-2
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J. Biol. Chem. 258, 4459-4463, 1983
A;Title: Cloning of mouse carbonic anhydrase mRNA and its
A;Reference number: A20539; MUID:83161023; PMID:6187736
A;Accession: A20539
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A;Residues: 2-36;'H',40-260 <CUR>
A;Cross-references: GB:K00811; GB:K00812; GB:M11830; NID:g192333; PIDN:AAA37356.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Status: preliminary; translated from GB/EMBL/DDBJ
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A; Residues: 1-77
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
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93; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQVPGLD 312
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h, D.; Watt, R.; Venta, P.J.; Tashian,
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A;Molecule type: mRNA
A;Residues; 225-242 <RE2>
A;Cross-references: GB:869526; NID:g545850; PIDN:AAB30170.1; PID:gA;Cross-references: GB:869526; NID:g545850; PIDN:AAB30170.1; PID:gA;Cross-references: GB:869526; NID:g545850; PIDN:AAB30170.1; PID:gA;Cross-references: GB:869526; NID:g545850; PIDN:AAB30170.1; PID:g4526; A;Contents: annotation; T.A.; Liljas, A.; February 1989
A;Reference number: A50085; PDB:1CA2
A;Contents: annotation; X-ray crystallography, 2.0 angstroms, resingly R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, I.; Fridborg, K. R;Liljas, A.; Kannan, K.K.; Bergsten, P.C.; Waara, A.; Kannan, K.K.;
A;Gene: GDB:CA2

A;Cross-reterences: GDB:119739; CMIM:259730

A;Map position: 8q13-8q22.1

A;Introns: 12/1; 78/1; 117/3; 148/3; 169/3; 221/3

C;Function:
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A;Note: the complete nucleotide sequence is not shown
R;Hu, P.Y.; Ernst, A.R.; Sly, W.S.; Venta, P.J.; Skaggs, L.A.; Tashian, F.A., J. Hum. Genet. 54, 602-608, 1994
Am. J. Hum. Genet. 54, 602-608, 1994
A;Title: Carbonic anhydrase II deficiency: single-base deletion in exon 7.
A;Reference number: I51871; MUID:94175074; PMID:8128957
A;Accession: I51871
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A,Note: submitted to the EMEL/GenBank/DDBJ databases by David Hewett-Emmett
R,Venta, P.J.; Welty, R.J.; Johnson, T.M.; Sly, W.S.; Tashian, R.E.
Am. J. Hum. Genet 49, 1082-1090, 1991
A;Title: Carbonic anhydrase II deficiency syndrome in a Belgian family is ca
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A; Residues: 2-260 <LIN;
R; Rontgomery, J.C; Venta, P.J.; Tashian, R.E.; Hewett-Emmett, D.
Nucleic Acids Res. 15, 4687, 1987
Nucleic Acids Res. 15, 4687, 1987
A; Tittle: Nucleotide sequence of human liver carbonic anhydrase II
A; Reference number: 137214, MUID: 87231043; PMID: 3108857
A; Accession: 137214
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A;Residues: 2-260 AIRN>
R;Lin, K.T.D.; Deutsch, H.F.
J. Biol. Chem. 249, 2329-2337, 1974
A;Title: Human carbonic anhydrases. XII. The complete primary structure
A;Reference number: A92147; MUID:74143468; PMID:4207120
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A; Residues: 1-260 < RES>
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A/Molecule type: mRNA
A/Residues: 1-260 <RE3>
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A;Title: Comparison of the 5' regions of human and mouse carl A;Reference number: A90655; MUID:86077780; PMID:3000449
A;Accession: A23202
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J. Biol. Chem. 251, 5457-5463, 1976
A;Tille: The primary structure of human carbonic anhydrase
A;Reference number: A92194; MUID:77006079; PMID:823150
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A; Residues: 1-77 < VEN>
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A; Residues: 1-260 < MUR>
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F;1/Modified site: acetylated amino end (Ser) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Mallet, B.; Gulian, J.M.; Sciaky, M.; Laurent, G.; Charrel, M.
Biochim. Biophys. Acta 576, 290-304, 1979
A;Title: Formes moleculaires multiples de l'anhydrase carbonique erythrocytaire ovine.
A;Reference number: A90628; MUID:79145542; PMID:106895
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Biochim. Biophys. Acta 371, 534-548, 1974
A;Title: Amino acid sequence of sheep carbonic anhydrase
A;Reference number: A90598; MUID:75054988; PMID:4215456
A;Accession: A01145
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A; Residues: 1-259 < TAN>
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35.5%;
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R;Ferrell, R.E.; Stroup, S.K.; Tanis, R.J.; Tashian, R.E. Blochim. Blophys. Acta 533, 1-11, 1978
A;Title: Amino acid sequence of rabbit carbonic anhydrase A;Reference number: A01142; MUID:78144871; PMID:416851
A;Accession: A01142
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Keywords: acetylated amino end; carbon-oxygen lyase; hydro-lyase F;4-258/Domain: carbonic anhydrase homology cCAHs F;1/Modified site: acetylated amino end (Ser) #status experimental F;93,95,118/Binding site: zinc (His) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: protein
A;Residues: 1-259 <FER>
A;Note: 203-Glu was also found
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            carbonate dehydratase
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';Alternate names: carbonic anhydrase II
';Species: Oryctolagus cuniculus (domestic rabbit)
;Date: 31 Mar-1981 #sequence revision of the carbonic arroserion of the carbonic arrows arrows arrows arrows arrows are carbonic arrows arrows are carbonic 
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       140 HWRYG---GDPPWPRVSPACAGREQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRLR
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                                                              RLQLNFRATOPINGRVIEASF 390
                                                                                                                                     PRGLLPESLD
                                                                                                                                                                                                            ISALLPSDESRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQL---HTLSDTLWGPGDS
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PMVDNWR PTQPLKGRQVKASF
                                                                                                                                                                                                                                                                                      VHWNTKYGDFGKAVKHPDGLAVLGIFLKIG-SATPGLQKVVDTLSSIKTKGKSVDFTNFD
                                                                                                                                                                                                                                                                                                                                                         VHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQVPGLD
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Pred. No. 6.8e-17;
2; Mismatches 114;
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N;Alternate names: carbonic anhydrase II
C;Species: Rattus norvegicus (Norway rat)
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change
C;Accession: JH052; S20114
G;Stolle, C.A.; McGowan, M.H.; Heim, R.A.; Varia, M.; Neubauer,
Gene 109, 265-267; 1991

#text_change 22-Jun-1999

carbonic anhydrase

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and

A;Title: Nucleotide sequence of a cDNA encoding rat brain A;Reference number: JH0527; MUID:92112053; PMID:1765271 A;Accession: JH0527 A;Molecule type: mENA A;Residues: 1-260 <STO> A;Cross-references: EMBL:X58294; NID:g55837; PIDN:CAA41227

PIDN: CAA41227

PID: g55838

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carbonate dehydratase (EC 4.2.1.1) I - rhesus macaque (tentative sequence)
N,Alternate names: carbonic anhydrass I
C;Species: Macaca mulatta (rhesus macaque)
C;Date: 07-May-1981 #sequence_revision 07-May-1981 #text_change 31-Mar-2000
C;Accession: A01139
R;Henriksson, D; Tanis, R.J.; Tashian, R.E.
Biochem. Biophys. Res. Commun. 96, 135-142, 1980
A;Title: The amino acid sequence of carbonic anhydrase I from the Rhesus mac A;Reference number: A01139; MUID:81062409; PMID:6776950
A;Accession: A01139
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C;Comment: Carbonate dehydratese is a monomeric zinc metalloenzyme that catalyzes the
C;Superfamily: carbonate dehydratase; carbonic anhydrase homology
C;Keywords: carbon-oxygen lyase; hydro-lyase; zinc
F;5-259/Domain: carbonic anhydrase homology <CAH>
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A; Residues: 1-260 < HEN>
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WGPGDSRLQLNFRATQPLNGRVIEASF
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                                                                                                                                                    SELHIVHWNSAKYSSLABAVSKADGLAVIGVLMKVG
                                                                                                                                                                                            AEIHVVHLSTA-FARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSET 306
                                                                                                                                                                                                                                      AKEIINVGHSHVNFEDNDNRSVLKGGPFSDSYRLFQFHFHWGSSNEYGSEHTVDGVKYS
                                                                                                                                                                                                                                                                                  ELRLRNNGHSVQLTLPPGLEMAL---GP-GREYRALQLHLHWGAAGRPGSEHTVEGHRFP 247
                                                                                                                                                                                                                                                                                                                              DKNGPEQ-----WSKLYPIANGNNQSPVDIKTSEAKHDTSLKPISV---SYNPAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCSLLPGNLD-YWTYPGSLTTPPLLECVTWIVLKEPITVSSEQMSHFRKLNFNSEGEAEE 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQL---HTLSDTLWGPGDS 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NNGHSFNVEFDDSQDFAVLKEGPLSGSYRLIQFHFHWGSSDGQGSEHTVNKKKYAAELHL 120
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                                                                 PFTNFDPSTLLPSSLD-FWTYSGSLTHPPLYESVTWIICKESISVSSEQLAQFRSLLSNV
                                                                                                        QVPGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQL---HTLSDTL 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VHWNTKYGDFGKAVQHÞDGLAVLGIFLKIGÞ-ASQGLQKITEALHSIKTKGKRAAFANFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQVPGLD
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                                                                                                                                                                                                                                                                                                                                                                                                                                     15.1%; Score 366.5; DB 1; Length 260; 32.6%; Pred. No. 2.2e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                  48;
                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                              2.2e-16;
ches 109;
                                                                                                                                                    EANPKLOKVÍDAÍHAÍKTKOKRA 174
                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
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234 EGSNPVPIQRNNRPTQPLKGRTVRASF 260

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Search completed: March 5, 2004, 09:07:53
Job time : 21 secs

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GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

Sequence:

sequence

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
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US-08-481-656B-2
                                                                                                                                                                                                          PILING DATE: 15-JUN-194
ANTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-00:
TELEPHONE: 415-435-2034
TELEPHONE: 415-435-2034
TELEFAX: 415-435-0727
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 459 amino acids
TYPE: amino acids
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US-08-481-658B-2
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      Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, V
CURRENT APPLICATION DATA;
APPLICATION NUMBER: US/08/481,658B
FILING DATE: 07-JUN-1995
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
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CORRESPONDENCE ADDRESS:
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6 Mariposa Court
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First 37 amino acids represent
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represent mature protein
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US-08-76-08B-2
US-08-776-08B-2
US-08-776-08B-6
US-08-776-919-2
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PCT-US95-09145A-6
US-08-776-919-4
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Pred. No. 8.6e-197;
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                                                                                                APPLICATION NUMBER: US/08/477,504A FILING DATE: 07-JUN-1995 CLASSIFICATION: 424 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 08/260,190 FILING DATE: 15-JUN-1994 ATTORNEY/AGENT INFORMATION: NAME: Lauder, Leona L. REGISTRATION NUMBER: 30,863 REGISTRATION NUMBER: 30,863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 5972353
GENERAL INFORMATION:
APPLICANT: Zavada
TELEFAX: 415-435-0727 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                COMPUTER READABLE FORM.

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: PATEN: PC-DOS/MS-DOS

SOTTWARE: PATENTIN Release #1.0, Version

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/477,504A
                                                  REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-435-2034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 8
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APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and
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STREET: b...
OTTY: Tiburon
OTTY: Califor
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                                                                                                                                                                                                                                                                                                                                                                                                      California
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DESCRIPTION:
DESCRIPTION:
US-08-477-504A-2
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US-08-486-756A-2
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Best Local :
                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                          APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
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TYPE: amino
STRANDEDNESS:
                                                                                                                                                                                         STREET: 6 Maripose
CITY: Tiburon
STATE: California
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                  APPLICATION NUMBER: US/08/486,756A FILING DATE: 07-JUN-1995
                                                                                                                                                            COUNTRY: UZIP: 94920
                                                                                                                                                                                                                                               ADDRESSEE:
       CLASSIFICATION:
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6 Mariposa Court
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; TELEFAX: 415-435-0727
; INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 459 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY.
                                                                                                                                                                                   Sequence 2, Application US/08485862B Patent No. 5989838
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Best Local (
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                                                                     APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and
NUMBER OF SEQUENCES: 86
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DESCRIPTION: First 37 amino acids represent
DESCRIPTION: signal peptide, and remaining amino acids
DESCRIPTION: represent mature protein
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APPLICATION NUMBER: US 0
FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
                                                     TITLE OF INVENTION: MN NUMBER OF SEQUENCES: 8 CORRESPONDENCE ADDRESS:
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REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-
               ADDRESSEE: Leona L. Laud
STREET: 6 Mariposa Court
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Best Local Similarity
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, V
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,8621
FILING DATE: 07-UN-1995
PRIOR APPLICATION DATA: US 08/477,504
FILING DATE: 07-UN-1995
FILING DATE: 07-UN-1995
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-00
TBLECOMMUNICATION INFORMATION:
TELEPHONE: 415-435-2034
TELEFAX: 415-435-0727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 0
FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
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                                                                   GLLFAVTSVAFLVQMRRQHRRGTKGGVSYRPAEVAETGA 459
                                                                                                               DTLWGPGDSRLQLNFRATQPLNGRVIBASFPAGVDSSPRAABPVQLNSCLAAGDILALVF
                                                                                                                                                 DTLWGPGDSRLQLWFRATQPLWGRVIEASFFAGVDSSFRAAEPVQLWSCLAAGDILALVF 420
                                                                                                                                                                                       EEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLS 360
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signal peptide, and remaining a
represent mature protein
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US 08/260,190
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Pred. No. 8.6e-197;
); Mismatches 0;
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Best Local Similarity
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                                                                                                                                                                           MOLECULE TYPE:
DESCRIPTION:
DESCRIPTION:
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APPLICATION NUMBER: US 08/485,862
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
US 08/485,863
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLIATION NUMBER: US 08/402/00.
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 08/487,077
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
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ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                           TOPOLOGY:
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REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.4
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TLE OF INVENTION: MN Gene and Protein
MBER OF SEQUENCES: 96
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DDRESSEE: Leona L. Lauder
NEET: 369 Pine Street, Suite 610
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                                                         1 MAPLCPSPWLPILLIPAPAPGLTVQLLLSLLLLMPVHPQRLPRMQEDSPLGGGSSGEDDPL
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GEEDLPSEEDSPREEDPPGEEDLPGEEDLPGEEDLPEVKPKSEEEGSLKLEDLPTVEAPG 120
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                                                                                               Conservative
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First 37 amino acids represent
signal peptide, and remaining amino acids
represent mature protein
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                                                                                                             Score 2424; DB 3;
Pred. No. 8.6e-197;
                                                                                             Mismatches
                                                                                                                           Length 459;
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Patent No.
                                                                                                                            TELEFAX: 415-435-0727
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
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                                                                                                                                                                                                                                                                              FILING DATE: 07-JUN-1995
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/
FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
  MOLECULE TYPE:
DESCRIPTION:
DESCRIPTION:
                                                                                                                                                                                      NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REGERENCE/DOCKET NUMBER: D-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-435-2034
                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,077A
FILING DATE: 07-JUN-1995
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and
NUMBER OF SEQUENCES: 86
                                                                           STRANDEDNESS:
                                                        TOPOLOGY:
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                                                                                                                 LENGTH:
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6 Mariposa Court
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                                                        linear
protein
First 37 amino acids represent
signal peptide, and remaining
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RESULT 7
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Patent No. 6093548
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                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,863A
FILING DATE: 07-JUN-1995
CLASSIFICATION 514
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 08/260,190
ENTING DATE: 15-JUN-1004
                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Pastorek, JaTITLE OF INVENTION: MN NUMBER OF SEQUENCES: 86
                                 FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Leona L.
NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3G
                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                               STREET:
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Tiburon
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Pred. No. 8.6e-197;
, Mismatches 0;
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Best Local &
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MOLECULE TYPE:
DESCRIPTION:
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DESCRIPTION:
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                          GLLFAVTSVAFLVOMRROHRRGTKGGVSYRPAEVAETGA 459
                                                            DTLWGPGDSRLQLNFRATQPLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVF
                                                                                     DTLWGPGDSRLQLNFRATQPLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVF 420
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signal peptide, and remaining a
represent mature protein
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Pred. No. 8.6e-197;
); Mismatches 0;
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RESULT 8
US-08-485-049D-2
US-08-485-049D-2
; Sequence 2, Application US/08485049D
; Patent No. 6204370
; GENERAL INFORMATION:
 APPLICANT: Zavada, Jan
 APPLICANT: Pastorekova, Silvia
 APPLICANT: Pastorek, Jaromir
 TITLE OF INVENTION: MN Gene and Protein COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: FC-DOS/MS-DOS NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
ADDRESSEE: Leona L. Lauder
STREET: 369 Pine Street STREET: 355 CITY: San Francisco STATE: California COUNTRY: 94104

```
Sequence 2, Application US/091781:
Patent No. 6297041
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastcorek, Jaromir
TITLE OF INVENTION: MN Gene and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin Release #1.0, Ver CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,049D FILING DATE: 07-UN-1995
CLASSLIFICATION: 435
FRIOR APPLICATION: 435
FRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-UN-1994
ATTORNEY/AGENT INFORMATION:
NAME: LAUGET, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3E
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-981-2034
TELEPHONE: 415-981-2034
TELEFANT: 415-981-2034
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 459 amino acids
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TOPOLOGY: lir
NOLECULE TYPE:
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signal peptide, and remaining
represent mature protein
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EARLIER APPLICATION NUMBER: 08/477,504
EARLIER APPLICATION NUMBER: 08/481,658
EARLIER APPLICATION NUMBER: 08/485,862
EARLIER APPLICATION NUMBER: 08/485,862
EARLIER APPLICATION NUMBER: 08/485,862
EARLIER FILING DATE: 1995-06-07
EARLIER APPLICATION NUMBER: 08/460,190
EARLIER APPLICATION NUMBER: 08/260,190
EARLIER FILING DATE: 1994-06-15
EARLIER FILING DATE: 1994-06-15
EARLIER FILING DATE: 1992-06-07
EARLIER FILING DATE: 1992-10-21
EARLIER APPLICATION NUMBER: 08/260,589
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EARLIER APPLICATION NUMBER: 08/260,589
EARLIER APPLICATION NUMBER: 09/964,589
EARLIER APPLICATION NUMBER: 08/17,093
EARLIER FILING DATE: 1992-00-11
EARLIER APPLICATION NUMBER: 08/17,093
EARLIER FILING DATE: 1992-00-15
EARLIER APPLICATION NUMBER: 08/17,093
EARLIER FILING DATE: 1992-00-15
EARLIER APPLICATION NUMBER: 08/17,093
EARLIER FILING DATE: 1995-06-07
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RRENT APPLICATION NUMBER: US/09/178,115

RRENT FILING DATE: 1998-10-23

RRIER APPLICATION NUMBER: 09/177,776

RRIER FILING DATE: 1998-10-23

RRIER APPLICATION NUMBER: 08/787,739

RRIER FILING DATE: 1997-01-24

RRIER APPLICATION NUMBER: 08/485,049

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ER FILING DATE: 1995-06-07
ER APPLICATION NUMBER: 08/477,504
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ER APPLICATION NUMBER: 08/481,658
ER FILING DATE: 1995-06-07
ER APPLICATION NUMBER: 08/485,862
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                         GLLFAVTSVAFLVQMRRQHRRGTKGGVSYRPAEVAETGA
                                                                      GLLFAVTSVAFLVQMRRQHRRGTKGGVSYRPAEVAETGA
                                                                                                                                 DTLWGFGDSRLQLNFRATQFLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVF
                                                                                                                                                                      DTLWGPGDSRLQLNFRATQPLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVF
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Pred. No. 8.6e-197;
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CURRENT FILING DATE: 1998-10-23
EARLIER APPLICATION NUMBER: 08/787,739
EARLIER APPLICATION NUMBER: 08/85,049
EARLIER FILING DATE: 1995-06-07
EARLIER APPLICATION NUMBER: 08/485,049
EARLIER APPLICATION NUMBER: 08/4756
EARLIER APPLICATION NUMBER: 08/477,504
EARLIER FILING DATE: 1995-06-07
EARLIER APPLICATION NUMBER: 08/485,862
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US-09-177-776-2
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SOFTWARE: PatentIn Ver. 2
SEQ ID NO 2
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EARLIER FILING DATE: 1993-12-30
EARLIER APPLICATION NUMBER: 07/964,589
EARLIER FILING DATE: 1992-10-21
EARLIER APPLICATION NUMBER: PV-709-92
EARLIER FILING DATE: 1992-03-11
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APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
FILE REFERENCE: D-0021.5A
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ORGANISM: HUMAN
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; LENGTH: 422
; TYPE: PRT
; CRGANISM: Human
US-08-335-469-2
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TITLE OF INVENTION: Methods to Detect and Quantify MN
TITLE OF INVENTION: Methods to Detect and Quantify MN
TITLE OF INVENTION: Using MN-Specific Antibodies
FILE REFERENCE: D-0021A
CURRENT APPLICATION NUMBER: US/08/335,469A
CURRENT FILING DATE: 1994-11-07
EARLIER APPLICATION NUMBER: 07/964,589
EARLIER APPLICATION NUMBER: 07/964,589
EARLIER OF SEQ ID NOS: 4
NUMBER OF SEQ ID NOS: 4
SOFTWARE: Patentin Ver. 2.0
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GENERAL INFORMATION:
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APPLICANT: Pastorekova,
APPLICANT: Pastorek, Ja
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                                       PRAAEPVOLNSCLAAGDILALVFGLLFAVTSVAFLVOMRROHRRGTKGGVSYRPAEVAET
                                                                    PRAAEPVQLNSCLAAGDILALVFGLLFAVTSVAFLVQMRRQHRRGTKGGVSYRPAEVAET
                                                                                                         QGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSRLQLNFRATQPLNGRVIEASFPAGVDSS
                                                                                                                                                                             FLEEGPEENSAYEQLLSRLEEIAEEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCA
                                                                                                                                                                                                               FLEEGPEENSAYEQLISRIEEIAEEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCA
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US-08-787-739-87 !Sequence 87, Application US/08787739 ; Patent No. 6027887

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US-08-787-739-87
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Best Local Sim
Matches 377;
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 377 amino acids
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/485,049
                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: prof
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PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
PRIOR ON NUMBER: US 08/485,863
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Leona L. Lauder
STREET: 369 Pine Street, Suite 610
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 08
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
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FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-
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IOR APPLICATION DATA:
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Pred. No. 1.2e-161;
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                                                                                                                                                                                                         Mismatches
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; ORGANISM: HUMAN
US-09-178-115-87
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CURRENT FILING DATE: 1998-10-23
EARLIER APPLICATION NUMBER: 09/177,776
EARLIER FILING DATE: 1998-10-23
EARLIER FILING DATE: 1998-10-23
EARLIER FILING DATE: 1997-01-24
EARLIER FILING DATE: 1997-01-24
EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1995-06-07
EARLIER APPLICATION NUMBER: 08/485,756
                                                                                   Query Match
Best Local S
Matches 377
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                                                                                                                                                                                                                                                                                                                           EARLIER APPLICATION NUMBER: PV-709-92
EARLIER FILING DATE: 1992-03-11
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ER FILING DATE: 1995-06-07
ER APPLICATION NUMBER: 08/485,863
ER FILING DATE: 1995-06-07
ER APPLICATION NUMBER: 08/487,077
ER APPLICATION NUMBER: 08/280,190
ER APPLICATION NUMBER: 08/280,190
ER APPLICATION NUMBER: 08/280,190
ER APPLICATION NUMBER: 08/280,190
ER APPLICATION NUMBER: 08/177,093
ER APPLICATION NUMBER: 08/177,093
ER APPLICATION NUMBER: 07/964,589
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APPLICATION NUMBER: 08/477,504
FILING DATE: 1995-06-07
APPLICATION NUMBER: 08/481,658
FILING DATE: 1995-06-07
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                                       QRLPRMQEDSPLGGGSSGEDDPLGEEDLPSEEDSPREEDPPGEEDLPGEEDLPE
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                                                                                        Conservative
                                                                            82.8%; 5cc
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EARLIER APPLICATION NUMBER: 08/485,049
EARLIER APPLICATION NUMBER: 08/486,756
EARLIER APPLICATION NUMBER: 08/476,566-07
EARLIER APPLICATION NUMBER: 08/477,504
EARLIER APPLICATION NUMBER: 08/477,504
EARLIER APPLICATION NUMBER: 08/471,504
EARLIER APPLICATION NUMBER: 08/481,658
EARLIER FILING DATE: 1995-06-07
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EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1995-06-07
EARLIER FILING DATE: 1994-06-15
EARLIER FILING DATE: 1994-06-15
EARLIER APPLICATION NUMBER: 08/177,093
EARLIER APPLICATION NUMBER: 07/964,589
EARLIER FILING DATE: 1992-10-21
EARLIER FILING DATE: 1992-10-21
                                                                                                                                                                                             SOFTWARE: PatentIn
SEQ ID NO 87
LENGTH: 377
                                              Matches
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                                                                 Query Match
Best Local
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                                                                                                                                TYPE: PRT
ORGANISM: HUMAN
-09-177-776-87
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APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
FILE REFERENCE: D-0021.5A
CURRENT APPLICATION NUMBER: US/09/177,776A
CURRENT FILING DATE: 1998-10-23
CURRENT FILING DATE: 1998-10-23
CURRENT FILING DATE: 1998-10-3
                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 116
SOFTWARE: PatentIn Ver. 2
                                                                                                                                                                                                                                                                                 EARLIER APPLICATION NUMBER: PV-709-92
EARLIER FILING DATE: 1992-03-11
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                                          al Similarity
377; Conserv
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                                       82.8%; Score 2007; DB 3; I larity 100.0%; Pred. No. 1.2e-161; Conservative 0; Mismatches 0;
                                                                                 Length 377;
                                            Indels
                                          0;
                                          Gaps
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TELEPHONE: 415-777-9257

TELEPAX: 415-543-4219

INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 429 amino acids
TYPE: AMINO ACID
TYPE: TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-964-589-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
US-07-964-589-2
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Query Match 57.7
Best Local Similarity 69.3
Matches 300; Conservative
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APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                              APPLICATION NUMBER: US/07/964
FILING DATE: 19921021
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L
REGISTRATION NUMBER: D-00
REFERENCE/DOCKET NUMBER: D-00
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-777-9257
                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TWEE: Floppy disk
COMPUTER: IBM PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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ADDRESSEE: Leona L. Lauder
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57.7%; Score 1398.5; DB 1; 69.1%; Pred. No. 4e-110; tive 12; Mismatches 83;
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341 ÒPĽNGRVIBĀSFPĀĞVDS 439 HRRGTKGGVSYRPA 452 	281 SDFSRYFQYEGSLTTPP	221 FARVDEALGREGGLAVL 319 SDFSRYFQYEGSLTTPP0	163 QCATDÞASWARDGSG 259 FARVDEALGRDGGLAVL 	201 SVQLTLPPGLEMALGPGRE	151RVSPACAGREQSPVDIRPQLAAFC	97 EVKPKSBEBGSIKLEDLP :: 60 KLMPKSBEBGSIKLEDLP	38 QRLPRMQEDSPLGGGSS(
SPRAAEPVQLNSCLAAGDILALVFGLLFAVTSVAFLVQMRRQ	SDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSRLQLNFRAT QPLNGRVIEASFAGVDSSPRAAEPVQLNSCLAAGDILALVFGLLFAVTSVAFLVQMRRQ	FARVDEALGR GGCLAVLAÞFWRXARKKTVSYEQLLSRLÆFILÐELABEGSETQVPGIÐÍSALLÞ SDESRYFQYEGSLTTÞPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGÐSRLQLNFRAT	-QCATDPASWARDGSGSRAGVPÅLQLHLHWGAÅGRPGSEHTVEGHRFPÅEIHVVHLSTA ARVDEALGRPGGLAVLAAFLEEGPEENSALGQLLSRLEEILEEGSETQVPGLDISALLP	18YRALQLHLHWGAAGRPGSEHTVEGHRPPAEIHVVHLSTA	RPQLAAFCPALRPLELLGFQLPPLPELRLRNNGH	EVKDKSEEEGSLKLEDLPTVEAPGDPQEDQNNAHRDKEGDDQSHWRYGGDPDWP ::	QRLPRMQEDSPLGGGSSGEDDPLGEEDLPSEEDSPREEDPPGEEDLPGEEDL-P QRLPRMQEDSPLEEALLGKWTHWARRICPVKRIHPERRIHP-ERRIYLERRIYLERRIYL
400	340 438	280 378	220 318	2 8	200	150 119	0 6 0 9

Search completed: March 5, 2004, 09:08:29 Job time : 24 secs

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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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1: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*

4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*

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6: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

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15 US-10-465-572-10
15 US-10-295-027-306
15 US-10-295-027-1239
9 US-09-783-708-1
10 US-09-967-237-87
10 US-09-967-237-87
10 US-09-967-237-87
10 US-09-972-719-51
9 US-09-772-719-54
10 US-09-933-000A-27
11 US-09-933-000A-27
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Sequence 2, Appli
Sequence 12, Appli
Sequence 110, Appl
Sequence 100, Appl
Sequence 1239, App
Sequence 1239, Appl
Sequence 17, Appli
Sequence 51, Appli
Sequence 51, Appli
Sequence 54, Appli
Sequence 423, Appli
Sequence 47, Appli
Sequence 27, Appli
Sequence 27, Appli
Sequence 27, Appli
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APPLICANT: Zavada,
APPLICANT: Pastore
APPLICANT: Pastore
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ALIGNMENTS

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S-09-772-719-2
Sequence 2, Application US/09772719
Patent No. US20020137910A1
GENERAL INFORMATION:
APPLICANT: Pastorekova, Silvia
APPLICANT: Wastorekova, Silvia
APPLICANTION UM Gene and Protein
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
ADDRESSEE Leona L. Lauder
STREET: 369 Pine Street
CITY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94104
COMPUTER: CALIFORNIA

COMPUTER: CALIFORNIA

MEDIUM TYPE: Floppy disk
COMPUTER: TADBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: LEATION NUMBER: US/09/772,719
FILING DATE: 97-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION NUMBER: US/09/772,719
FILING DATE: 30-JAN-2001
CURASIFICATION NUMBER: US/08/485,049
FILING DATE: 107-JUN-1994
AFTORNEY/AGENT INFORMATION:
PRIOR PAPEL ATION NUMBER: US/08/260,190
FILING DATE: 15-JUN-1994
AFTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: US/08/260,190
FILING DATE: 15-JUN-1994
AFTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: US/08/260,190
FILING DATE: 15-JUN-1994
AFTORNEY/AGENT INFORMATION:
FELEPHONE: 415-981-0334
TELLEPHONE: 415-981-0334
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Sequence 2, Application US/09967237
Publication No. US20030049828A1
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLB OF INVENTION: MN Gene and Protein
FILE REFERENCE: D-0021.5B-2
CURRENT APPLICATION NUMBER: US/09/967,237
CURRENT APPLICATION NUMBER: US/09/967,237
CURRENT FILING DATE: 2001-09-27
PRIOR APPLICATION NUMBER: 09/178,115
PRIOR FILING DATE: 1998-10-23
NUMBER OF SEQ ID NOS: 116
SOFTWARE: Patentin Ver. 2.1
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                                                ORGANISM: HUMAN
US-09-967-237-2
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signal peptide, and remaining amino
represent mature protein
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Pred. No. 1.6
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Score
Pred.
2424;
No. 1
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1.6e-181;
 4; DB 10;
1.6e-181;
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Matches

459;

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Mismatches

Indels

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Gaps

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APPLICANT: Thibodeau, Stephen N.
APPLICANT: Burgart, Lawrence J.
TITLE OF INVENTION: MOVEL GENES, COMPOSITIONS, KITS, AND
TITLE OF INVENTION: METHODS FOR IDENTIFICATION, ASSESSMENT, PRE
TITLE OF INVENTION: METHODS FOR IDENTIFICATION, ASSESSMENT, PRE
FILE REFERENCE: MPMO1-029PZRNM
CURRENT APPLICATION NUMBER: US/10/301,822
CURRENT FILING DATE: 2002-11-21
PRIOR APPLICATION NUMBER: US 60/339,971
PRIOR FILING DATE: 2002-11-20
PRIOR FILING DATE: 2001-12-10
PRIOR FILING DATE: 2001-12-10
PRIOR FILING DATE: 2001-12-10
PRIOR FILING DATE: 2002-03-05
PRIOR APPLICATION NUMBER: US 60/361,978
PRIOR APPLICATION NUMBER: US 60/361,988
PRIOR FILING DATE: 2002-03-05
PRIOR APPLICATION NUMBER: US 60/381,988
PRIOR FILING DATE: 2002-05-20
NUMBER OF SEQ ID NOS: 228
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 12
LENGTH: 459
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; ORGANISM: Homo
US-10-301-822-12
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US-10-301-822-12
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Publication No. US20030148410A1
GENERAL INFORMATION:
APPLICANT: Millennium Pharmaceuticals,
APPLICANT: Berger, Allison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                    Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Berger, Allison
Guillemette, Tracy L
Kamatkar, Shubhangi
Schlegel, Robert
Monahan, John E.
                      Similarity
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    100.0%; llarity 100.0%; Conservative 0
                                                                                                  Sapiens
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                      Score 2424;
Pred. No. 1.
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; DB 14;
1.6e-181;
les 0;
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APPLICANT: Riggins, Gregory
APPLICANT: Lal, Anita
APPLICANT: Lal, Anita
TITLE OF INVENTION: GRUSS INDUCED BY HYPOXIA
FILE REFERENCE: 000250.00012
CURRENT APPLICATION NUMBER: US/10/465,572
CURRENT FILING DATE: 2003-06-20
PRIOR APPLICATION NUMBER: US/10/201,642
PRIOR APPLICATION NUMBER: US/10/201,642
PRIOR APPLICATION NUMBER: 007-24
PRIOR APPLICATION NUMBER: 60/307,600
PRIOR FILING DATE: 2001-07-26
PRIOR APPLICATION NUMBER: 60/307,600
PRIOR FILING DATE: 2001-07-26
PRIOR APPLICATION NUMBER: 00/307,600
PRIOR FILING DATE: 2001-07-26
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US-10-465-572-10
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-465-572-10
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Best Local :
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                        181
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                                                                                                                                                                                                                                                                                                           Similarity 100
59; Conservative
ELLGFQLPPLPELRLRNNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGRPGSEHT
                                                                                           DPQEPQNNAHRDKEGDDQSHWRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPL 180
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                                                                                                                                                                                                                                                                                                         100.0%; Score 2424; DB 15; 100.0%; Pred. No. 1.6e-181; vative 0; Mismatches 0;
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APPLICANT: Mack, David H.
APPLICANT: Marray, Richard
APPLICANT: Marson, Susan R.
APPLICANT: Matson, Susan R.
APPLICANT: Matson, Susan R.
APPLICANT: Eos Biotechnology, Inc.
ITILE OF INVENTION: Methods of Diagnosis of Cancer, Compositions and TITLE OF INVENTION: Methods of Screening for Modulators of Cancer
FILE REPERENCE: 0.18501-012500US
CURRENT PILING DATE: 2002-11-13
PRIOR APPLICATION NUMBER: US /10/295,027
CURRENT FILING DATE: 2000-09-15
PRIOR APPLICATION NUMBER: US 09/663,733
PRIOR APPLICATION NUMBER: US 09/663,733
PRIOR APPLICATION NUMBER: US 60/350,666
PRIOR FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: US 60/332,464
PRIOR APPLICATION NUMBER: US 60/332,464
PRIOR APPLICATION NUMBER: US 60/332,464
PRIOR APPLICATION NUMBER: US 60/334,393
PRIOR APPLICATION NUMBER: US 60/344,393
PRIOR APPLICATION NUMBER: US 60/347,316
PRIOR APPLICATION NUMBER: US 60/347,211
PRIOR APPLICATION NUMBER: US 60/347,349
PRIOR APPLI
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                                                                                                                         ; TYPE: PRT
; ORGANISM: Homo
US-10-295-027-306
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US-10-295-027-306
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Query Match
Best Local S
Matches 459
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APPLICANT:
APPLICANT:
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Hevezi, Peter A.
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Score 2424; DB 15;
Pred. No. 1.6e-181;
0; Mismatches 0;
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APPLICANT: Eos Biotechnology, Inc.
APPLICANT: Bos Biotechnology, Inc.
TITLE OF INVENTION: Methods of Diagnosis of Cancer, Compositions and
TITLE OF INVENTION: Methods of Screening for Modulators of Cancer
FILE REFERENCE: 018501-012500US
CURRENT FILING DATE: 2000-12500US
CURRENT FILING DATE: 2000-09-15
PRIOR APPLICATION NUMBER: US 60/350,666
PRIOR FILING DATE: 2000-11-13
PRIOR APPLICATION NUMBER: US 60/350,666
PRIOR FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: US 60/35,394
PRIOR FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: US 60/332,464
PRIOR FILING DATE: 2001-11-21
PRIOR APPLICATION NUMBER: US 60/334,393
PRIOR FILING DATE: 2001-11-29
PRIOR FILING DATE: 2001-11-29
PRIOR APPLICATION NUMBER: US 60/340,376
PRIOR APPLICATION NUMBER: US 60/340,376
PRIOR FILING DATE: 2002-01-08
PRIOR FILING DATE: 2002-01-08
PRIOR FILING DATE: 2002-02-01
PRIOR FILING DATE: 2002-02-01
PRIOR FILING DATE: 2002-02-01
PRIOR FILING DATE: 2002-02-03
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APPLICANT: Aziz, Natash
APPLICANT: Gish, Kurt C
APPLICANT: Gish, Kurt C
APPLICANT: Glynne, Rich
APPLICANT: Hevezi, Pete
APPLICANT: Murray, Rich
APPLICANT: Murray, Rich
APPLICANT: Watson, Susai
APPLICANT: Watson, Susai
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Watson, Susan R.
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Hevezi, Peter A.
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SOFTWARE: PatentIn Ver.
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APPLICANT: The Regents of the University of California ITILE OF INVENTION: KINEY-SPECIFIC TUMOR VACCINE DIRECTEI TITLE OF INVENTION: KINEY-SPECIFIC TUMOR VACCINE DIRECTEI FILE REFERENCE: 306T-897420US; CURRENT APPLICATION NUMBER: US/09/783,708 CURRENT FILING DATE: 2001-02-13 PRIOR APPLICATION NUMBER: 60/182,429 PRIOR FILING DATE: 2000-02-14 PRIOR FILING DATE: 2000-02-15 PRIOR FILING DATE: 2000-02-15 PRIOR PILING DATE: 2000
                                                                                                                                                                                                                                                                                                                        ; FEATURE:
; OTHER INFORMATION:
US-09-783-708-1
Query Match 99.8%; Sometimes 99.8%; Sest Local Similarity 100.0%; Matches 458; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                              G250-GM-CSF fusion protein
        Score 2419; DB 9;
Pred. No. 5.6e-181;
0; Mismatches 0;
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Indels

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Gaps

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Sequence 1, Application US/09783708 Patent No. US20020058041A1 GENERAL INFORMATION:

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240

397 300

360

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FILE REFERENCE: D-0021.5B-2
CURRENT APPLICATION NUMBER: US/09/967,237
CURRENT FILING DATE: 2001-09-27
PRIOR APPLICATION NUMBER: 09/178,115
PRIOR FILING DATE: 1998-10-23
NUMBER OF SEQ ID NOS: 116
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 87
                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 377
; TYPE: PRT
; ORGANISM: HUMAN
US-09-967-237-87
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US-09-967-237-87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 87, Application US/09967237
Publication No. US20030049828A1
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 377; Conserv
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REYRALQLHLHWGAAGRPGSEHTVEGHRFPAEIHVVHLSTAFARVDEALGRPGGLAVLAA
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                                                              GREQSEVDIREQUARECPALRELELLGEQUEPLEELRLRUNGHSVQUTLEEGLEMALGEG
                                                                                      GRFQSPVDIRFQLAAFCPALRPLELLGFQLPPLPELRLRNNGHSVQLTLPPGLEMALGPG
                                                                                                                                                                     VKPKSEEEGSIKLEDIPTVEAFGDPQEPQNNAHRDKEGDDQSHWRYGGDPFWPRVSPACA 157
                                                                                                                                                                                                                     QRLPRMQEDSPLGGGSSGEDDPLGEEDLPSEEDSPREEDPPGEEDLPGEEDLPGSEDLPE 60
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100.0%; Pr
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APPLICANT: PASTOTEKOVA, SIVIA
APPLICANT: PASTOTEK, Jaromir
ITILE OF INVENTION: MN Gene and Protein
FILE REFERENCE: D-0021.5B-2
CURRENT PELLING DATE: 2001-09-27
CURRENT FILING DATE: 2001-09-27
PRIOR APPLICATION NUMBER: 09/178,115
PRIOR FILING DATE: 1998-10-23
NUMBER OF SEQ ID NOS: 116
SOFTWARE: PATENTIN VET: 2.1
SEQ ID NO 51
LENGTH: 257
TYPE: PRT
ORGANISM: HUMAN
US-09-967-237-51
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US-09-967-237-51
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US-09-772-719-51
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      GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and P:
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 51, Application US/09967237
Publication No. US20030049828A1
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 257; Conserv
                                                                                                                                            Sequence 51, Application US/09772719 Patent No. US20020137910A1
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100.0%; Pr
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US-09-772-719-54
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SEQUENCE CHARACTERISTICS:
LENGTH: 256 amino acids
TYPE: amino acid
TYPE: amino acid
TYPE: amino acid
                                                                                                     Sequence 54, Application US/09772719
Patent No. US200201379.0A1
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-981-2034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/485,049
FILING DATE: 07-UN-1995
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-UN-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 365 ....
CITY: San Francisco
STATE: California
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DESCRIPTION: carbonic anhydrase domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
               APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
                                                                    APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   136 DDQSHWRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
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                                                                                                                                                                                                                                                                                                                                                          LLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSRLQLNF
                                                                                                                                                                                                                                                   RATOPLNGRVIEASFP 256
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369 Pine Street
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Leona L. Lauder
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_30-JAN-2001
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cive 0;
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MOLECULE TYPE: US-09-772-719-54
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Best Local Similarity 100.0%; F
Matches 170; Conservative 0;
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 170 amino acid
TYPE: amino acid
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OPERATING SYSTEM: PC-DCS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/772,719
FILING_DATE: 30-JAN-2001
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APPLICATION NUMBER: US 08/485,049
FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
ANALY: 13-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 365 concerns constructed construction constructio
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Lauder, Leona L
REGISTRATION NUMBER:
                                                                                     341 IWTVFNQTVMLSAKQLHTLSDTLWGPGDSRLQLNFRATQPLNGRVIEASF 390
                                                                                                                                                                                                                                                                                                                       281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              221 RALQIHIHWGAAGRPGSEHTVEGHRFPAEIHVVHLSTAFARVDEALGRPGGLAVLAAFLE
121
                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                              1 RALQLHLHWGAAGRPGSEHTVEGHRFPAEIHVVHLSTAFARVDEALGRPGGLAVLAAFLE
                                                                                                                                                                                                                                                                                                 EGPEENSAYEQLLSRLEEIAEEGSETQVPGLDISALLPSDPSRYFQYEGSLTTPPCAQGV 340
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RESULT 12
US-09-946 423, Application US/09946374
Publication No. US20030073129A1
Publicant Baker, Kevin P.
APPLICANT Botstein, David
APPLICANT Eaton, Dan L.
APPLICANT Eaton, Dan L.
APPLICANT Forg, Sherman
APPLICANT Goodward, Napoleone
APPLICANT Goodward, Audrey
APPLICANT Goodward, Audrey
APPLICANT Grinaldi, Christopher J.
APPLICANT Grinaldi, Christopher J.
APPLICANT Hillan, Kenneth J.
APPLICANT Pan, James
APPLICANT Pan, James
APPLICANT Pan, James
APPLICANT Roy, Margaret Ann
APPLICANT Smith, Victoria
APPLICANT Smith, Victoria
APPLICANT Smith, Victoria

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APPLICANT: Tumas, Daniel
APPLICANT: Watanabe, Colin K.
APPLICANT: Williams, P. Mickey
APPLICANT: William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P283091C1
CURRENT APPLICATION NUMBER: US/09/946,374
CURRENT FILING DATE: 2001-09-04
CURRENT FILING DATE: 2001-09-04
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PRIOR FILING DATE: 1998-09-01
PRIOR APPLICATION NUMBER: 60/098723
PRIOR FILING DATE: 1998-09-01
PRIOR APPLICATION NUMBER: 60/098749
PRIOR FILING DATE: 1998-09-01
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OR PELLICATION NUMBER: 60/100661
OR FILING DATE: 1998-09-16
OR APPLICATION NUMBER: 60/100662
OR APPLICATION NUMBER: 60/100664
OR APPLICATION NUMBER: 60/100664
OR FILING DATE: 1998-09-16
OR APPLICATION NUMBER: 60/100683
OR FILING DATE: 1998-09-17
OR APPLICATION NUMBER: 60/100694
OR FILING DATE: 1998-09-17
OR APPLICATION NUMBER: 60/100710
OR APPLICATION NUMBER: 60/100711
OR APPLICATION NUMBER: 60/100711
OR APPLICATION NUMBER: 60/100711
OR APPLICATION NUMBER: 60/100711
OR FILING DATE: 1998-09-17
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R APPLICATION NUMBER: 60,
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R APPLICATION NUMBER: 60,
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R APPLICATION NUMBER: 60/08
R FILING DATE: 1998-09-10
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R FILING DATE: 1998-09-10
R APPLICATION NUMBER: 60/08
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RE APPLICATION NUMBER: 60/09
RE RILING DATE: 1998-09-09
DR APPLICATION NUMBER: 60/09
RE FILING DATE: 1998-09-09
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REFLING DATE: 1998-09-0.

RAPPLICATION NUMBER: 60.

DR FILING DATE: 1998-09-0.

DR APPLICATION NUMBER: 60.

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R APPLICATION NUMBER: (R FILING DATE: 1998-09)
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APPLICATION NUMBER: 60
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APPLICATION NUMBER: 60
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FILING DATE: 1998-09-0
APPLICATION NUMBER: 60
FILING DATE: 1998-09-0
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       OR APPLICATION NUMBER: 60/10104
OR APPLICATION NUMBER: 60/10104
OR PILING DATE: 1998-09-18
OR APPLICATION NUMBER: 60/101071
OR APPLICATION NUMBER: 60/101071
OR PILING DATE: 1998-09-22
OR APPLICATION NUMBER: 60/101471
OR FILING DATE: 1998-09-23
OR APPLICATION NUMBER: 60/101472
OR APPLICATION NUMBER: 60/101475
OR FILING DATE: 1998-09-23
OR APPLICATION NUMBER: 60/101476
OR FILING DATE: 1998-09-23
OR APPLICATION NUMBER: 60/101479
OR APPLICATION NUMBER: 60/101479
OR APPLICATION NUMBER: 60/101479
OR APPLICATION NUMBER: 60/101741
OR FILING DATE: 1998-09-24
OR APPLICATION NUMBER: 60/101741
OR APPLICATION NUMBER: 60/101741
OR APPLICATION NUMBER: 60/101741
OR APPLICATION NUMBER: 60/101741
OR APPLICATION NUMBER: 60/10174
OR APPLICATION NUMBER: 60/10220
OR APPLICATION NUMBER: 60/10230
OR APPLICATION NUMBER: 60/10257
OR APPLICATION NUMBER: 60/10257
OR APPLICATION NUMBER: 60/10257
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FILING DATE: 1998-09-17
APPLICATION NUMBER: 60/100930
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FILING DATE:

CATION NUMBER: 60/103396

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RESULT 13
US-09-983-000A-27
US-09-983-000A-27
; Sequence 27, Application US/09983000A
; Publication No. US20030118585A1
; GENERAL INFORMATION:
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PRIOR FILLING DATE: 1998-10-14
PRIOR APPLICATION NUMBER: 60/104987
PRIOR FILLING DATE: 1998-10-20
PRIOR FILLING DATE: 1998-10-20
PRIOR FILLING DATE: 1998-10-20
PRIOR FILLING DATE: 1998-10-20
PRIOR APPLICATION NUMBER: 60/105002
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Best Local S
Matches 128
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PRIOR FILING DATE: 1998-10-22
PRIOR APPLICATION NUMBER: 60/105693
PRIOR FILING DATE: 1998-10-26
PRIOR APPLICATION NUMBER: 60/105694
PRIOR FILING DATE: 1998-10-26
PRIOR APPLICATION NUMBER: 60/105807
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APPLICANT: AGY Therapeutics APPLICANT: Melcher, Thorsto APPLICANT: Mueller, Sabine APPLICANT: Chin, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OR APPLICATION NUMBER: 60/103679
OR FILING DATE: 1998-10-08
PRESENTION NUMBER: 60/103711
OR FILING DATE: 1998-10-08
OR APPLICATION NUMBER: 60/104257
OR FILING DATE: 1998-10-14
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FILING DATE: 1998-10-08
APPLICATION NUMBER: 60/103678
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FILING DATE: 1998-10-07
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FILING DATE: 1998-10-06
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APPLICATION NUMBER: 60/105104
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128; Conserv
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                                          Thorsten
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Pred. No. 7.7e-36;
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Sequence 74, Application US/10006867
Publication No. US20020119130A1
GENERAL INFORMATION:
APPLICANT: Batcon, Dan L.
APPLICANT: Filvaroff, Ellen
APPLICANT: Gerritsen, Mary B.
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul J.
APPLICANT: Grimaldi, Christopher J.
APPLICANT: Gurney, Austin L.
APPLICANT: Gurney, Austin L.
APPLICANT: Watanabe, Colin K.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SCRETED AND TRANSMEMBRANE POLYPEPTIDES AND TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C1
CURRENT APPLICATION NUMBER: U$/10/006,867
CURRENT ETLING DATE: 2001-12-06
PRIOR APPLICATION NUMBER: 60/063435
PRIOR FILING DATE: 1997-10-29
PRIOR FILING DATE: 1997-10-29
PRIOR FILING DATE: 1997-10-29
PRIOR FILING DATE: 1997-10-29
PRIOR APPLICATION NUMBER: 60/062797
PRIOR APPLICATION NUMBER: 60/082797
PRIOR APPLICATION NUMBER: 60/082797
PRIOR FILING DATE: 1998-04-29
PRIOR FILING DATE: 1998-04-29
PRIOR FILING DATE: 1998-04-29
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US-10-006-867-74
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TITLE OF INVENTION: OF BRAIN TUMORS
FILE REFERENCE: 263/180 -- PEAGLEMAN -- AGY
CURRENT APPLICATION NUMBER: US/09/983,000A
CURRENT FILING DATE: 2001-10-17
NUMBER OF SEQ ID NOS: 35
SOSTWARE: PATENTIN Version 3.1
SEQ ID NO 27
LENGTH: 337
TYPE: PAT
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Best Local Similarity
Matches 128; Conserv
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Grimaldi, Christopher of Grimaldi, Christopher of Grim K.
Watanabe, Colin K.
Wood, William I.
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APPLICATION NUMBER: 60/085579 FILING DATE: 1998-05-15 APPLICATION NUMBER: 60/087759

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APPLICATION FILING DATE: APPLICATION FILING DATE:	PPLIC	TLING PPLIC	PPLIC	PPLIC	DELTC	PPLIC	PPLIC	PPLIC	PPLIC	PPLIC	PPLIC	PPLIC	PPLIC	PPLIC	PPLIC	ILING	ILING	ILING	PPLIC	PPLIC	PPLIC	DITTE	PPLIC	PPLIC	PPLIC	PPLIC	ILING	ILING	ILING	ILING	PPLIC	PPLIC	PPLIC	PPLIC	PPLIC	PELIC
ON NUMBER: TE: 1999-0 ON NUMBER: TE: 1999-0	NUMBER 1999-	. 1999- NUMBER	: 1999- NUMBER	1999-	1998-	1998- NUMBER	. 1998-	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	. 1998-	NUMBER	1998-	. 1998-	1998-	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	1998-	: 1998-	1998:	1998-	HEEFT:	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
60/11952 2-10 60/11954 2-10	60/11928	1-22 60/11928 2-09	1-20 60/11684	1-12	2-30 60/11561	2-23 60/11422	-23 60/11362	-22 60/11343	-22 60/11340	-16 60/11330	60/11285	-16 -16	60/11285	60/11242 -15	60/11241 -15	-17	-03	-30	-28 60/10646	-27 60/10603	60/10588	60/10500	60/10500 -30	60/10371 -08	60/10367 -08	60/10367 -08	60/10344 -06	-30	-24 -24	-24	-24 60/10174	-23 60/10173	60/10147	0/10127	60/10093 -17	60/100684 9-17
/1195	/11928	71192	/11684	/11652	/1156	3 /11422	3 /1136	2 /1134	2 /1134	6 /1133	/1128	/1130	/1128	/1124 5	/1124 5	7 10880	3 000	71065	8 /1064	7 /1060	8501	/1050	/1050	/1037 8	/1036 8	/1036	6	0 1023	/10191 4	4.	4 /1017	3 /1017	/1014	/1012	/1009	7

COR PILLING DATE: 1998-06-02

COR APPLICATION NUMBER: 60/08021

COR PILLING DATE: 1998-06-04

COR APPLICATION NUMBER: 60/08030

COR PILLING DATE: 1998-06-04

COR PILLING DATE: 1998-06-04

COR APPLICATION NUMBER: 60/08074

COR APPLICATION NUMBER: 60/08081

COR APPLICATION NUMBER: 60/08081

COR APPLICATION NUMBER: 60/080824

COR APPLICATION NUMBER: 60/080952

COR APPLICATION NUMBER: 60/080953

COR APPLICATION NUMBER: 60/0809514

COR APPLICATION NUMBER: 60/080952

COR APPLICATION NUMBER: 60/080952

COR APPLICATION NUMBER: 60/080952

COR APPLICATION NUMBER: 60/09064

COR APPLICATION NUMBER: 60/090662

COR APPLICATION NUMBER: 60/09069

COR APPLICATION NUMBER: 60/09069

COR APPLICATION NUMBER: 60/09069

COR APPLICATION NUMBER: 60/090797

COR APPLICATION NUMBER: 60/090797

COR APPLICATION NUMBER: 60/09797

COR APPLICATION NUMBER: 60/099791

COR APPLICATION NUMBER:

PRIOR PRIOR

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Sequence 268, Application US;
Publication No. US2002012755
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Chen, Jian
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul (
APPLICANT: Godowski, Paul (
APPLICANT: Gurney, Austin I
APPLICANT: Smith, Victoria
APPLICANT: Smith, Victoria
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US-10-052-586-268
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Best Local
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OR APPLICATION NUMBER: 60/191007
OR APPLICATION NUMBER: 60/191007
OR FILING DATE: 2000-03-21
OR APPLICATION NUMBER: 60/199397
OR APPLICATION NUMBER: 60/199397
OR FILING DATE: 1998-08-25
OR APPLICATION NUMBER: 09/380139
OR APPLICATION NUMBER: 09/380139
OR APPLICATION NUMBER: 09/380137
OR APPLICATION NUMBER: 09/380137
OR APPLICATION NUMBER: 09/380137
OR FILING DATE: 1999-08-25
OR APPLICATION NUMBER: 09/380138
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OR APPLICATION NUMBER: 60/129674
OR FILING DATE: 1999-04-16
OR APPLICATION NUMBER: 60/131291
OR FILING DATE: 1999-04-27
OR APPLICATION NUMBER: 60/138387
OR FILING DATE: 1999-06-09
OR APPLICATION NUMBER: 60/144791
OR FILING DATE: 1999-07-20
OR APPLICATION NUMBER: 60/169495
OR APPLICATION NUMBER: 60/169495
OR APPLICATION NUMBER: 60/175481
OR FILING DATE: 1999-12-07
OR APPLICATION NUMBER: 60/175481
OR FILING DATE: 2000-01-11
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FILING DATE:
APPLICATION N
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                                                              Chen, Jian
Desnoyers, Luc
Goddard, Audrey
Godowski, Paul J
Gurney, Austin L.
Pan, James
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IVHYDSDSYDSLSEAAERPQGLAVLGILIEVGETKNIAYEHILSHLHEVRHKDQKTSVPP
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      Smith, Victoria Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                      Application US/10052586
5. US20020127584A1
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Pred. No. 7.7e-36;
7; Mismatches 129;
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CURRENT APPLICATION NUMBER: US/10/052,586
CURRENT FILING DATE: 2002-01-15
PRICK APPLICATION NUMBER: 60/059263
PRICK FILING DATE: 1997-09-18
PRICK FILING DATE: 1997-09-18
PRICK FILING DATE: 1997-09-18
PRICK FILING DATE: 1997-09-18
PRICK FILING DATE: 1997-10-24
PRICK APPLICATION NUMBER: 60/063120
PRICK APPLICATION NUMBER: 60/063120
PRICK FILING DATE: 1997-10-24
PRICK APPLICATION NUMBER: 60/063121
PRICK APPLICATION NUMBER: 60/063540
PRICK FILING DATE: 1997-10-28
PRICK FILING DATE: 1997-10-28
PRICK APPLICATION NUMBER: 60/063544
PRICK PILING DATE: 1997-10-28
PRICK PILING DATE: 1997-10-29
PRICK APPLICATION NUMBER: 60/063734
PRICK APPLICATION NUMBER: 60/063734
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   OR APPLICATION NUMBER: 60/077450
OR RILING DATE: 1998-03-10
OR APPLICATION NUMBER: 60/077649
OR RILING DATE: 1998-03-11
OR APPLICATION NUMBER: 60/077649
OR FILING DATE: 1998-03-21
OR RILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/079839
OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/079964
OR APPLICATION NUMBER: 60/079664
OR FILING DATE: 1998-03-27
OR APPLICATION NUMBER: 60/07978
OR APPLICATION NUMBER: 60/07978
OR APPLICATION NUMBER: 60/07978
OR APPLICATION NUMBER: 60/080107
OR APPLICATION NUMBER: 60/080194
OR APPLICATION NUMBER: 60/080327
OR RILING DATE: 1998-03-31
OR APPLICATION NUMBER: 60/080327
OR RILING DATE: 1998-04-01
OR APPLICATION NUMBER: 60/080327
OR RILING DATE: 1998-04-01
OR APPLICATION NUMBER: 60/080330
OR RILING DATE: 1998-04-08
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OR APPLICATION NUMBER: 60/66772

OR PILING DATE: 1997-11-24

OR APPLICATION NUMBER: 60/069335

OR FILING DATE: 1997-12-11

OR APPLICATION NUMBER: 60/069425

OR FILING DATE: 1997-12-12

OR APPLICATION NUMBER: 60/069870

OR APPLICATION NUMBER: 60/068017

OR APPLICATION NUMBER: 60/068017

OR APPLICATION NUMBER: 60/068017

OR APPLICATION NUMBER: 60/068017

OR FILING DATE: 1997-12-18
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OF INVENTION: SECRETED
OF INVENTION: ACIDS EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/065311
FILING DATE: 1997-11-13
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LING DATE: 1998-04-09

NUMBER: 60/081195 NUMBER: 60/081070

1998-04-

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OR APPLICATION NUMBER: 60/082704
OR FILING DATE: 1998-04-22
OR APPLICATION NUMBER: 60/082797
OR APPLICATION NUMBER: 60/08322
OR FILING DATE: 1998-04-28
OR APPLICATION NUMBER: 60/083495
OR APPLICATION NUMBER: 60/083496
OR FILING DATE: 1998-04-29
OR APPLICATION NUMBER: 60/083496
OR FILING DATE: 1998-04-29
OR APPLICATION NUMBER: 60/083496
OR APPLICATION NUMBER: 60/083559
OR APPLICATION NUMBER: 60/084366

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OR APPLICATION NUMBER: 60/081838
OR FILING DATE: 1998-04-15
OR APPLICATION NUMBER: 60/082568
OR FILING DATE: 1998-04-21
OR APPLICATION NUMBER: 60/082569
OR FILING DATE: 1998-04-21

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Best Local Similarity
Matches 128; Conserv
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OR APPLICATION NUMBER: 60/088811
OR APPLICATION NUMBER: 60/088824
OR PILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088825
OR APPLICATION NUMBER: 60/088825
OR APPLICATION NUMBER: 60/088826
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OR APPLICATION NUMBER: 60/088861
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OR APPLICATION NUMBER: 60/088863
OR FILING DATE: 1998-06-11
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OR APPLICATION NUMBER: 60/088217
OR FILING DATE: 1998-06-05
OR APPLICATION NUMBER: 60/088326
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088655
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DR FILING DATE: 1998-06-16
DR APPLICATION NUMBER: 60/089538
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089598
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R APPLICATION NUMBER: 60/088722
DR FILING DATE: 1998-06-10
DR APPLICATION NUMBER: 60/088738
DR FILING DATE: 1998-06-10
DR APPLICATION NUMBER: 60/088740
completed:
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FILING DATE: 1998-06-17
APPLICATION NUMBER: 60/089908
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FILING DATE: 1998-06-16
                                                                           303
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              136 DDQSHWRY---GGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLELLGFQLPPLPE 192
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                                                                                                     --VTSVAFLVQMRRQHRRGTKGGVSYRPAE
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                                                                                                                                                                                                                                                                     FNLRELLPKQLGQYFRYNGSLTTPPCYQSVLWTVFYRRSQISMEQLEKLQGTLFSTEEEP
                                                                                                                                                                                                                                                                                               LDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSR 370
                                                                                                                                                                                                                                                                                                                                                                IVHYDSDSYDSLSBAABRPQGLAVLGILIEVGETKNIAYEHILSHLHEVRHKDQKTSVPP 195
                                                                                                                                                                                                                                                                                                                                                                                                              VVHL-STAFARVDEALGREGGLAVLAAFLEEGFEENSAYEQLLSRLEEIAEEGSETQVPG 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                LDLHNNCHTVQLSLPSTLYLG-GLPRKYVAAQLHLHWGQKGSPGGSEHQINSEATFAELH 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DGGQHWTYEGPHGQDHWPASYPECGNNAQSPIDIQTDSVTFDPDLPALQPHGYDQPGTEP
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Pred. No. 7.7e-36;
7; Mismatches 129;
     09:13:52
                                                                             332
                                                                                                                         453
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.7e-36;
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Gaps

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OR PFLICATION NUMBER: 60/084414
OR FILING DATE: 1998-05-06
OR APPLICATION NUMBER: 60/084639
OR APPLICATION NUMBER: 60/084640
OR FILING DATE: 1998-05-07
OR APPLICATION NUMBER: 60/084643
OR FILING DATE: 1998-05-07
OR APPLICATION NUMBER: 60/085573
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OR APPLICATION NUMBER: 60/085579

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60/087759 60/087609

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1998-06-05

60/088202 60/088167 60/088033

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APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER:

1998-06-

60/088029

1998-06-04 1998-06-03

60/088025 60/087827

60/088028

425

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APPLICATION

NUMBER:

1998-06-04

PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

OR FILING DATE: 1998-05-15
OR APPLICATION NUMBER: 60/086023
OR FILING DATE: 1998-05-18
OR APPLICATION NUMBER: 60/086392
OR FILING DATE: 1998-05-22
OR APPLICATION NUMBER: 60/086486
OR FILING DATE: 1998-05-22
OR APPLICATION NUMBER: 60/087098
OR APPLICATION NUMBER: 60/087098
OR APPLICATION NUMBER: 60/087208
OR APPLICATION NUMBER: 60/087208
OR APPLICATION NUMBER: 60/087208
OR FILING DATE: 1998-05-28
OR FILING DATE: 1998-05-28
OR FILING DATE: 1998-05-28

DR FILING DATE: 1998-05-15

DR APPLICATION NUMBER: 60/085580

DR APPLICATION NUMBER: 60/085582

DR APPLICATION NUMBER: 60/085700

DR APPLICATION NUMBER: 60/085700

Job time : 41 secs

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Title:
Perfect score:
Sequence:
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Maximum DB seq length: 200000000
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Maximum Match 100%
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     33210
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Gapop 10.0 , Gapext 0.5
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Query Match
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Matches 459;
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I CATALYTIC ACTIVITY: H(2)CO(3) = CO(2) + H(2)O.

COPACTOR: Zinc (By similarity).

SUBCULTIC ACTIVITY: FOUND ON THE SURFACE MICROVILLI AND NUCLEOUS, PARTICULARLY IN MUCLEOUUS.

TISSUE SPECIFICITY: EXPRESSED PRIMARILY IN CARCINOMA CELLS EXPRESSION IS RESTRICTED TO VERY FEW NORMAL TISSUES AND THANDUNDANT EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN THE EPITHELIAL CELLS OF GARDINARY IN THE PRIMARILY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN TEXT OF THE PRIMARILY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN TEXT OF THE PRIMARILY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN TEXT OF THE PRIMARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN THE PRIMARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IS FOUND IN THE EPITHELIAL CELLS OF GARDINARY IN CARCINOMA CELLS EXPRESSION IN CARCINOMA C
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Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,
"Generation and initial analysis of more than 15,000
human and mouse cDNA sequences.",
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
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Pastorekova S., Zavadova Z., Kostal M., Babusikova O., Zavad
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Virology 187:620-626(1992).
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                                                                                                        EEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLS
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2 Q8VHB5; Q8K1G1; Q8VDE4;
2 Q8VHB5; Q6K1G1; Q8VDE4;
3 10-CCT-2003 (Rel. 42, Created)
3 10-CCT-2003 (Rel. 42, Last sequence update)
DT 10-CCT-2003 (Rel. 43, Last annotation update)
DT 15-MAR-2004 (Rel. 43, Last annotation update)
Carbonic anhydrase IX precursor (EC 4.2.1.1) (Carbo carbonic anhydrase IX precursor (EC 4.2.1.1) (Carbo carbonic anhydrase IX precursor (EC 4.2.1.1) (Carbo carbonic anhydrase IX precursor (EC 4.2.1.1) (Carbonic anhydrase IX precursor (EC 4.2.1.1) (Car
SEQUENCE FROM N.A. (ISOFORM 2).
STRAINICR; TISSIDE-Small intestine;
Warg Y.F., Yoshikawa K., Kozaki K., Miyaishi O., Nakagawa
Muramatsu H., Kawada Y., Uchida K., Nishikawa N., Saga S.;
"Alternative spliced mRNA coding for MN/CA9.";
Submitted (JUN-2002) to the EMBL/GenBank/DBU databases.
-!- FUNCTION: Reversible hydration of carbon dioxide (By s
-!- CATALYTIC ACTIVITY: H(2)CO(3) = CO(2) + H(2)O.
-!- COFACTOR: Zinc (By similarity).
                                                                                                                                                                                                                                                                                                                                    SEQUENCE
Ortova M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Monoclonal antibodies gemice recognize different carbonic anhydrase IX.";
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STRAIN=129/Ola;
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Mammalia; Eutheria;
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Pfam; PF00194; carb anhydrase; 1.
ProDom; PD000865; Euk COanhd; 1;
PROSITS; PS00162; EUK CO2 ANHYDRASE;
Lyase; Zinc; Transmembrane; Glycoprot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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EMBL; AJ245857; CAC60975.1; -.
EMBL; AB086322; BAC00816.1; -.
MGD; MGI:2447188; Car9.
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ALTERNATIVE PRODUCTS:
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              DTLWGPGDSRLQLNFRATQPLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVF
                                                            EEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLS
                                                                                                                  VEGHRFPAEIHVVHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIA
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VSLWGPRDSRLQLNFRATQPLNGRTIEASFPAAEDSSP--
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88F23380DCD35344 CRC64;
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RX MEDLINE-22388257, PubMed:1247932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Schmefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schmefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schmefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Brapleton M.J., Usdin T.B., Toshiyuki S., Casrant T.L., Scheetz T.E.,
RA Stapleton M.J., Usdin T.B., Toshiyuki S., Casranci P., Prange C.,
RA Barwmstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Barwmstein M.J., Warney K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S.S., Morley K.C., Hale S., Garcia A.M., Gy L.J., Hulyk S.W.,
RA Richards S.W., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gy L.J., Hulyk S.W.,
RA Richards J., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Willalon D.K., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Willalon D.K., Touchman J.W., Green B.J., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.,
ROMERTON A., Schein J.E., Jones S.J.M., Marra M.A.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Salska U., Smailus D.E.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Salska U., Smailus D.E.,
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RA Rodriguez A.C., Grimwood J., Schmutz J., Salska U., Smailus D.E.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Salska U., Smailus D.E.,
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Negai K., Nishikawa T., Hayashi K., Otsuki T., Sugiyama Suzuki Y., Nagai K., Sugano S., Ishii S., Kawai-Hio Y., Saito K., Yamamoto J., Wakamatsu A., Nakamura Y., Kojima S., Nagahari K., Yamamoto Y., Ono T., Okano K., Yoshikawa Y., Aotsuka S., Sasaki N., Hattori A., Okumura K., Iwayanagi T., Ninomiya K.;

"NEDO human cDNA sequencing project.";

Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
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16-OCT-2001 (Rel. 40, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Carbonic anhydrase XIV precursor (EC 4.2.1.1)
   This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no resti
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Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; V
Catarrhini;
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i; Hominidae;
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                                              a collaboration -
MBL outstation -
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EMBL

outstation -

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CAHE MOUSE

CAHE MOUSE

CAHE MOUSE

ID __CAHE, MOUSE

ID __CAHE, MOUSE

AC __COT_2001 (Rel. 40, Created)

DT __16-OCT_2001 (Rel. 40, Last sequence update)

DT __15-MAR.2004 (Rel. 43, Last annotation update)

DE __CATONIC anhydrase XIV precursor (EC 4.2.1.1) (Ca XIV) (CA-XIV)

GN __CAL OR __CARL4 OR __CATM.

CS __Mus musculus (Mouse).

CC __Bukaryota; Metazoa; Chordata; Craniata; Vertebrow __CC __Bukaryota; Metazoa; Chordata; Sciurognathi; Mu __NCBI__TaxID=10090;
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Best Local S
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CARBOHYD
CONFLICT
SEQUENCE
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SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
METAL
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GO; GO:0016021; C:integral t
GO; GO:0004089; F:carbonate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP; 043570; 1JD0.
Genew; HGNC:1372; CA14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AB025904; BAA85002.1; -. EMBL; AK074765; BAC11191.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRANSMEM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BC034412; ; 043570; 1JI
                                                                                                                                                                                                                                                                                          426
                                                                                                                                                                                                                                                                                                                                            371
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PF00194; carb anhydrase; 1
m; PD000865; Euk COanhd; 1.
TE; PS00162; EUK CO2 ANHYDE
                                                                                                                                                                                                                                                                 303
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                           VVHL-STAFARVDBALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLBEIAEEGSETQVPG
                                                                                                                                                                                                                                                                  CLLLAVYFIARKIRKKRLENRKSVVFTSAQ
                                                                                                                                                                                                                                                                                        --VTSVAFLVOMRROHRRGTKGGVSYRPAE
                                                                                                                                                                                                                                                                                                                                                                                    LDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSR
                                                                                                                                                                                                                                                                                                                                                                                                                      IVHYDSDSYDSLSEAAERPOGLAVLGILIEVGETKNIAYEHILSHLHEVRHKDOKTSVPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LDLHNNGHTVQLSLPSTLYLG-GLPRKYVAAQLHLHWGQKGSPGGSBHQINSEATFAELH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LRLRNNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGRP-GSEHTVEGHRFPAEIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DGGQHWTYEGPHGQDHWPASYPECGNNAQSPIDIQTDSVTFDPDLPALQPHGYDQPGTEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DDQSHWRY---GGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLELLGFQLPPLPE
                                                                                                                                                                                                                                                                                                                    SKLLVQNYRALQPLNQRMVFASF--
                                                                                                                                                                                                                                                                                                                                        LQL---NFRATQFLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVFGLLFA--
                                                                                                                                                                                                                                                                                                                                                                    FNLRELLPKQLGQYFRYNGSLTTPPCYQSVLWTVFYRRSQISMEQLEKLQGTLFSTEEEP
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291
312
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1119
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ZINC (CATALYTIC) (BY SIMILARITY).

ZINC (CATALYTIC) (BY SIMILARITY).

ZINC (CATALYTIC) (BY SIMILARITY).

N-LINKED (GLONAC. . .) (POTENTIAL).

V -> A (IN REF. 2).

M; 6E101C44EA70A700 CRC64;
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Pred. No. 3.7e
47; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PÕTENTIAL.
                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    membrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANHYDRASE XIV.
ULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     activity; TAS
                                                                                                                                                                                                                                                                                          453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
.7e-25;
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RX MEDLINE-22388257; PubMed=12477932;
RX MEDLINE-22388257; PubMed=12477932;
RA Klausher R.D., Collins F.S., Magner L., Schennen C.M., Schuler G.D.,
RA Klausher R.D., Collins F.S., Magner L., Schennen C.M., Schuler G.D.,
RA Altechnil S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altechnil S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.S., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M., Soares M.S., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., MogNen P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Sichmutz J., Myers R.M.,
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.;
RA Rodriguez A.C., Schein
Query Match
Best Local Sim
Matches 130;
                                                                                   METAL
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Kidney;
MEDLINE=99269110; PubMed=10336468;
MOTI K., Ogawa Y., Ebihara K., Tamura N., Tashiro K., Kuwahara T.,
Mori K., Ogawa Y., Ebihara K., Tamura N., Tashiro K., Kuwahara T.,
Mukoyama M., Sugawara A., Ozaki S., Tanaka I., Nakao K.;
Mukoyama M., Sugawara A., Ozaki S., Tanaka I., Nakao K.;
"Isolation and characterization of A XIV, a novel membrane-bound carbonic anhydrase from mouse kidney.";
J. Biol. Chem. 274:15701-15705(1999)."
                                                                                                                                                     DOMAIN
METAL
METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [2]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AB005450; BAA78709.1; -.
EMBL; BC046995; AAH46995.1; -.
HSSP; O43570; LJD0.
                                                                                                                                                                                                                                                                                                        ProDom; PD000865; Euk Coanhd; 1.
PROSITE; PS00162; EUK CO2 ANHYDE
Lyase; Zinc; Transmembrane; Sigr
                                                                                                                                                                                                                                                                                                                                                                                                            HSSP; 043570; 1000
MGD; MGI:1344341;
                                                                                                                                                                                                                          RANSMEM
                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                          nterPro; IPR001148; Euk_COanhd.
                                                                                     135
213
337
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16
291
312
109
111
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                       23.0%;
                                                                                                                                                                                                                                                                                                                                  CO2_ANHYDRASE;
                                                                                          Ϋ́Ε.
                                                                                     CARBONIC ANHYDRASE XIV.
CARBONIC ANHYDRASE XIV.
EXTRACELLULAR (POTENTIAL).
POTENTIAL.
CYTOPLASMIC (POTENTIAL).
ZINC (CATALYTIC) (BY SIMILARITY).
ZINC (CATALYTIC) (BY SIMILARITY).
ZINC (CATALYTIC) (BY SIMILARITY).
ZINC (CATALYTIC) (BY SIMILARITY).
N-LINKED (GLUARA...) (POTENTIAL)
NH, 32F02F4DB78ACOC9 CRC64;
                       Score 558;
Pred. No. 6.
                                                                                                                                                                                                                                                                                                                                  FALSE_NEG
                                             DB 1;
                                             Length 337;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    collaboration
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Similarity

.2e-25

Indels

28;

Gaps

4

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R.A., S., Sanchez ard G.G.,

Α.

Shah 30-292

G.N.,

Grubb

J.H.,

protein

overexpressed

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domain

of human

protein

H(2)0 dioxide.

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CAHC_HUMAN

ID CAHC_HUMAN

CAHC_HUMAN

ID CAHC_HUMAN

CAHC_HUMAN

CAHC_HUMAN

AC 043570; 09BWG2;

DT 15-UUL-1999 (Rel. 38, Created)

DT 15-UUL-1999 (Rel. 38, Last sequence update)

DT 10-OCT-2003 (Rel. 42, Last annotation update)

DT 10-OCT-2003 (Rel. 42, Last annotation update)

DE Carbonic anhydrase XII precursor (EC 4.2.1.1) (Ca

DE XII) (Cha.XII) (Tumor antigen HOM-RCC-3.1.3).

OS Homo sapiens (Human).

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrat

OC Mammalia; Eutheria; Primates; Catarrhini; Hominid

OX NCBI_TAXID=9806;

RA SEQUENCE FROM N.A. (ISOFORM 1), AND CHARACTERIZAT

RC TISSUE=Renal cell carcinoma;

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tuereci O., Sahin U., Vollmar E., Siemer S., Goet

RA Tueronsomal localization of a carbonic anhydrase

Overexpressed in some renal cell cancers.";

RA Tunnov S.V., Kuzmin I., Wei M.-H., Pack S., Geil

RA Tuenov S.V., Kuzmin I., Wei M.-H., Pack S., Geil

RA Tuenov S.V., Kuzmin I., Wei M.-H., Pack S., Geil

RA Tuenov S.V., Kuzmin I., Wei M.-H., Pack S., Geil

RA Tuenov S.V., Kuzmin I., Wei M.-H., Pack S., Geil

RA Tuenov S.V., Kuzmin I., Wei M.-H., Pack S., Geil

RA Tuenov S.V., Kuzmin I., Wei M.-H., Pack S., Geil

RA Tuenov S.V., Kuzmin I., Wei M.-H., Pack S., Geil

RA Tuenov S.V., Salasian I., Moore T., Max S.I., Wan

RA Rabas S., Logella R., Packernan K.J., Malek J.

RA Chaser 
          MEDIINE-2388257; PubMed=12477932;

MEDIINE-2388257; PubMed=12477932;

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Jordan H., Moore T., Max S.I., Mang J., Hsieh F.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Mang J.,

Diatchenko L., Marusina K., Fammer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Stapleton M., J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,

Stapleton M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
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SEQUENCE FROM N.A. (ISOFORM 1), AND CHARACTERIZATION.
TISSUE-Renal cell carcinoma;
MEDLINE-98301622; PubMed-9636197;
MEDRINE-98301622; PubMed-9636197;
Therreci O., Sahin U., Vollmar E., Siemer S., Goettert E.
Parkkila A.-K., Shah G.N., Grubb J.H., Pfreundschuh M.,
"Human carbonic anhydrase XII: cDNA cloning, expression,
chromosomal localization of a carbonic anhydrase gene th
overexpressed in some renal cell cancers.";
overexpressed in some renal cell cancers.";
proc. Natl. Acad. Sci. U.S.A. 95:7608-7613(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDINE-98445416; PubMed-9770531; Pack S., Geil L., Johnson B.E., Stanbridge E.J., Lerman M.I., "Pack S., Geil L., Johnson B.E., "Down-regulation of transmembrane carbonic anhydrases in renal cecarcinoma cell lines by wild-type von Hippel-Lindau transgenes."; Proc. Natl. Acad. Sci. U.S.A. 95:12596-12601(1998).
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                             EMBL; AF051882; AAC39789.1; -
EMBL; AF037335; AAC63952.1; -
EMBL; BC000278; AAH00278.1; -
EMBL; BC01169; AAH11691.1; -
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CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a chetween the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and foentities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
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Proc. Natl. Acad. Sci. U.S.A. 98:9545-9550(2001)

Proc. Natl. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO; GO:0016021; C:integral to membra GO; GO:0004089; F:carbonate dehydrat GO; GO:0008270; F:zinc ion binding; InterPro; IPR001148; Euk COanhd.
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Note=No experimental confirmation available;
TISSUE SPECIFICITY: HIGHLY EXPRESSED IN COLON, KIDNEY, PROSTATE,
INTESTINE AND ACTIVATED LYMPHOCYTES. EXPRESSED AT WICH HIGHER
LEVELS IN THE RENAL CELL CANCERS THAN IN SURROUNDING NORMAL KIDNEY
TISSUE MODERATELY EXPRESSED IN PANCERAS, OVARY, AND TESTIS.
SIMILARITY: Belongs to the eukaryotic-type carbonic anhydrase
family.
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PD000865; Euk_COanhd; 1.
); PS00162; EUK_CO2_ANHYDRA:
Zinc; Transmembrane; Signa
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anson D.W.;
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    SAKQLHTLSDTLW----
                             IFSHLQHVKYKGQEAFVPGFNIEELLPERTAEYYRYRGSLTTPPCNPTVLWTVFRNPVQI
                                              LLSRLEEIAEEGSETQVFGLDISALLFSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVML
                                                                                       DPHGSEHTVSGQHFAAELHIVHYNSDLYPDASTASNKSEGLAVLAVLIEMG-SFNPSYDK
                                                                                                                   RP-GSSHTVEGHRFPAEIHVVHL-STAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEO
                                                                                                                                                DASLTPLEFQGYNLSANKQFLLTNNGHSVKLNLFSDMHIQ-GLQSRYSATQLHLHWGNPN
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                                                                                                                                                                                                                                                                                                                                          22.2%;
35.8%;
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 -GPGDSRLQLNFRATQPLNGRVIEASFPAGVDSSPRAAEPVQL
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N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
Missing (in isoform:
/FTId=VSP_000772.
                                                                                                                                                                                                                                                               Score 537.5; DB 1;
Pred. No. 9.4e-24;
6; Mismatches 142;
                                                                                                                                                                                                                                                                                                                          9016216BF2CA6COC CRC64;
                                                                                                                                                                                                        SKWTYFGPDGENSWSKKYPSCGGLLQSPIDLHSDILQY
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(POTENTIAL)
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CAHG SEARCH CHEEP
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AC PO8060
DT 01-AUG
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Best Local Sim:
Matches 111;
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SEQUENCE.

TISSUE=Saliva;

KMEDLINE=88294021; PubMed=3135834;

KMEDLINE=88294021; PubMed=3135834;

Rernley R.T., Wright R.D., Coghlan J.P.;

Reversion acid sequence of ovine salivary carbonic

Complete amino acid sequence of ovine salivary carbonic

Biochemistry 27:2815-2820(1988).

C-!- FUNCTION: Reversible hydration of carbon dioxide. It

saliva is unknown.

--- CATALYTIC ACTIVITY: H(2)CO(3) = CO(2) + H(2)O.

C-!- COFACTOR: Zinc (By similarity).

C-!- SUBCELLULAR LOCATION: Secreted.

--- TISSUE SPECIFICITY: Major consistuent of saliva.

--- TISSUE SPECIFICITY: Major consistuent of saliva.

--- SIMILARITY: Belongs to the eukaryotic-type carbonic
                                                                                                                                                                                                                                                                             LYASE; Zii
METAL
METAL
METAL
DISULFID
CARBOHYD
CARBOHYD
VARIANT
VARIANT
VARIANT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR, A29993; A29993.
HSSP; O43570; 1UDO:
InterPro; IPRO01148; Euk Coanhd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Cetartiodactyla, Ruminantia, Pecora, Bovoidea,
Bovidae, Caprinae, Ovis.
NCBI TaxID=9940,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIAM; PF00194; carb anhydrase; 1.
ProDom; PD000865; Euk_COanhd; 1.
PROSITE; PS00162; EUK_CO2_ANHYDRASE; 1.
Lyase; Zinc; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ovis aries (Sheep).
314 SALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSRLQL
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                                           125
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                                                                                                     NIGHTVQISLPSTMSMTTSDGTQYLAKQMHFHWGGASSEISGSEHTVDGMRYVIEIHVVH
                                                                                                                        NNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGR---PGSEHTVEGHRFPAEIHVVH
                                                                        LSTAFARVDEALGRPGGLAVLAAFLE-EGPEENSAYEQLLSRLEEIAEEGSETQVPGLDI
                                                                                                                                                              WTYSEGMLDEAHWPLEYPKCGGRRQSPIDLQMKKVQYNPSLRALNLTGYGLWH-GEFPVT
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; Pred. No. 3.66
40; Mismatches
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N-LINKED (GLCNAC.

N-LINKED (GLCNAC.

V -> M.

I -> M.
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Matches 127
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SEQUENCE
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the Euro
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-!- FUNCTION: Reversible hydration of carbon dioxide (By similarit).

-!- COTALTYIC ACTIVITY: H(2)CO(3) = CO(2) + H(2)O.

-!- COFACTOR: Zinc (By similarity).

-!- SUBCELLULAR LOCATION: Type I membrane protein (By similarity).

-!- SUBCELLULAR LOCATION: Type I membrane protein (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                Lyase;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9MZ30;
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-FEB-2003 (Rel.
15-MAR-2004 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00194; carb_anhydrase; 1. ProDom; PD000865; Euk_COanhd; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSSP; 043570;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AF263367; AAF91392.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=22417091; PubMed=12388401;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carboni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nterPro; IPR001148; Euk_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          s SWISS-PROT entry is copyright. It is produced through a cween the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict by non-profit institutions as long as its content is
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                                                                              al Similarity
127; Conserv
    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PD000865; EUK_COanhd; 1.
; PS00162; EUK_CO2_ANHYDRASE; 1.
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    GSLRAAAVLLLGIAQLPPSSAAPRNG
                                         GSLKLED----LPTVEAPGDPQEPQNNAHRDKEGDDQSHWRY----GGDPPWPRVSPACAGR
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                                                                                  Conservative
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Chordata; Craniata; Vertebrata; Euteleostomi;
Lagomorpha; Leporidae; Oryctolagus.
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                                                                                                                                                                             CARBONIC ANHYDRASE XII.
EXTRACELLULAR (POTENTIAL).
POTENTIAL).
CYTOPLASMIC (POTENTIAL).
ZINC (CATALYTIC) (BY SIMI
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                                                                                Score 512; DB 1;
Pred. No. 2.6e-22;
B; Mismatches 146
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(See http://www.isb-sib
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      SKWTYVGADGERSWFKKYPSCGGR
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Bovidae; Bovinar
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P18915; Q95322;
01-NOV-1990 (Re
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
TISSUE-Submaxillary gland;
MEDIINE=963.58528, PubMed=8761494;
Miang W., Woitach J.T., Gupta D.;
"Sequence of bovine carbonic anhydrase VI: E
sites for N-acety[galactosaminyltransferase.
Biochem. J. 318:291-296(1996).
                                                                                                                                                                                                                                                                                                                              Biochem. J
                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=89246331; PubMed=2497732;
Fernley R.T., Darling P., Aldred
"Tissue and species distribution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9913;
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                                                                                                                                                                                                                                                                                                           FUNCTION: Reversible
                                                                                                                                                              family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Bovine)
                                                                                                                                                                                                                                                                                                                              259:91-96 (1989)
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UL-NOV-1990 (Rel. 16, Created)
15-UUL-1999 (Rel. 38, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Carbonic anhydrase VI precursor (EC 4.2.1.1)
(CA-VI) (Secreted carbonic anhydrase) (Sal
                                                                                                                             saliva is unknown.

(APALYTIC ACTIVITY: H(2)CO(3) = CO(2) + H(2)O.

COFACTOR: Zinc (By similarity).

SUBCELLULAR LOCATION: Secreted.

TISSUB SPECIFICITY: Major consistuent of saliva.

SIMILARITY: Belongs to the sukaryotic-type carbo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVDSSPRAAEPVQL--NSCLAAGDILAL----VFGLLFAVTSVAFLVQMRRQHRRGTKGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QGVIWTVFNQTVMLSAKQLHTLSDTLW-----GPGDSRLQLNFRATQPLNGRVIBASFPA 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LIEKG-YFNPYYDRIFSFLRYVKYKGONVRIPTFNIEELLPEKPAEYYRYRGSLTTPPCY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FLEEGPEENSAYEQLLSRLEEIAEEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YTATQLHLHWGNRNDPYGSEHTVGGKQFAAELHIVHYNSDSYPDISTASNKSEGLAVLAV 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YRALQLHLHWGAAGRP-GSEHTVEGHRFPAEIHVVHL-STAFARVDEALGRPGGLAVLAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebrat
Cetartiodactyla; Ruminantia;
                                                                                                                                                                                                                                                                                                                                  the secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VI: potential
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minantia; Pecora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Salivary carbonic
                                                                                                                                                                                                                                                                   dioxide.
                                                                                                                                  carbonic anhydrase
                                                                                                                                                                                                                                                                                                                                  , Coghlan
l carbonic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       recognition
                         restrictions
                                                                                                                                                                                                                                                                   Its
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anhydrase
                                                                                                                                                                                                                                                                   role
                                              a collaboration
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Best Local Similarity
                                                                                                                                                                                                                                              Lyase; Zi
SIGNAL
CHAIN
METAL
METAL
METAL
DISULFID
CARBOHYD
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; X96503; CAA65357.1; --.
PIR; S71877; S71877.
HSSP; 043570; 1JD0.
       Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S. Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobc Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J., Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W., State J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousi Blake J.A., Bradt D., Fletcher C.F., Forrest A., Frazer K.S., Gasterland T., Gariboldi M., Gissi C., Godzik A., Gough J., Gasterland T., Gustinch S., Hirokawa N., Jackson I.J., Jarvis E., Fandar M., Gustinch S., Hirokawa N., Jackson I.J., Jarvis E., Fandar M., Fandar M., Fandar M., Fandar M., Jarvis E., Fandar M., Fandar M., Fandar M., Jarvis E., Fandar M., Fandar M., Jarvis E., Fandar M., Fandar M., Fandar M., Fandar M., Jarvis E., Fandar M., Fan
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ProDom; PD000865; Euk_COanhd; 1.
PROSITE; PS00162; EUK_CO2_ANHYDRASE;
                                                                                                                                 SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Kidney;
MEDLINE=22354683; PubMed=124668
                                                                                                                                                                         NCBI_TaxID=10090;
                                                                                                                                                                                                  Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                            CA12 OR CAR12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001148; Euk
                                                                                                                                                                                                                                                                                                                                         CAHC_MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NNGHSVQLTLPPGLEMALGPGREYRALQLHLHWG--AAGRPGSEHTVEGHRFPAEIHVVH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOSHWRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRLR 196
                                                                                                                                                                                                                                                                                                                                                                                                                                    NERATOPLNGRVIEASE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSTAFARVDEALGRPGGLAVLAAFLE-EGPEENSAYEQLLSRLEEIAEEGSETQVPGLDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NNGHTVQISLPSSMRMTTSDGSQYLAKQMHFHWGGDSSEISGSBHTVDGMRYIIBIHVVH
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106
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319
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Pred. No. 2
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2.6e-22;
les 97;
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(BY SIMILARITY).
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King B.L.,
             Jarvis E.D.
                                                                                           Kiyosawa H.,
Gojobori T.,
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Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,

Magabitta D.R., Malthis L., O., Marchomakur, McKenfestio, Miki H.,

And Magabitta T., Mutata K., O., Olthor, N., Recherch C.R., Psoid G.,

And Magabitta T., Mutata K., Olthor, N., Recherch C.R., Psoid G.,

And Ravesi T., Keed L., Reed D.J., Reid J., Recherch C.R., Sampha K.,

And Saltan R., Takenak K., A., Psoid J., Reid J., Stong J., Shinada K.,

And Shilan R., Takenak K., A., Yang J., Wang J., Yang J., Yang J.,

And Hirogare Hahikawa T., Komo H., Nakamura M., Katinabe Y., Walling G., Wyanghia K.,

And Hirogare Hahikawa T., Komo H., Nakamura M., Katinabe Y.,

And Hirogare Hahikawa T., Komo H., Nakamura M., Sakarum M., Sakot N.,

And Hirogare Hahikawa T., Komo H., Nakamura M., Katinabe Y.,

And Yang J., Javolan M., Zhu Y., Zimesi A., Cardinici P., Haydatsi N.,

And Hara A., Hahinaume W., Bookin M., Makamura M., Katinabe Y.,

And Yang J., Javolan M., Saki D., Javoka H., Jich M., Sakarum P.,

And Yang J., Javolan M., Saki D., Javoka H., Jich M., Sakarum M., Sakot N.,

And Hara A., Handinaume W., Bookin M., Manda M., Sakarum M., Sakarum P.,

And Yang J., Javolan H., Maretteon R., Lander E.S., Rogers J.,

And Hara A., Handinaum M., Saki D., Grouse L.H., Derge J.G.,

And Hara A., Handinaum M., Saki D., Grouse L.H., Derge J.G.,

B. Samilin C., Shilan M., Saki D., Grouse L.H., Derge J.G.,

B. Samilin C., Shilan M., Saki D., Grouse L.H., Derge J.G.,

B. Samilin C., Shilan M., Saki D., Grouse L.H., Derge J.G.,

B. Hara M., Hashi M., Saki D., Grouse L.H., Derge J.G.,

B. Hara M., Hashi M., Saki D., Grouse L.H., Derge J.G.,

B. Hara M., Hashi M., Saki D., Grouse L.H., Derge J.G.,

B. Hara M., Hashi M., Saki D., Grouse L.H., Derge J.G.,

B. Hara M., Hashi M., Saki D., Grouse L.H., Derge J.G.,

B. Hara M., Hashi M., Saki D., Grouse L.H., Derge J.G.,

B. Hara M., Hashi M., Saki D., Grouse L.H., Derge J.G.,

B. Hara M., Hashi M., Saki D., Hallyk S.W.,

B. Hara M., Hashi M., Saki D., Saki D., Grouse L.H., Bask F.,

B. Hara M., Hashi M., Saki D., Hallyk S.W.,

B. Har
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EMBL; AK052639; BAC35074.1; -.

R EMBL; BC035941; AAH35941.1; -.

R INTERPRO; IPR001148; EMBLAGAS; 1.

Pfam; PF00134; carb anhydrase; 1.

PF000m; PF00134; carb anhydrase; INKNOWN_1.

PROSITE; PS00162; EUK_CO2_ANYVDRASE; UNKNOWN_1.

PROSITE; PS00162; EUK_CO2_ANYVDRASE; UNKNOWN_1.

PROSITE; PS00162; EUK_CO2_ANYVDRASE; UNKNOWN_1.

PT ALYSES, Zinc; Transmembrane; signal.

POTENTIAL.

POTENTI

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RESULT 10
CAHG HUMAN
ID CAHG HUMAN
ID CAHG HUMAN
ID CAHG HUMAN
ID CAHG HUMAN
AC P23280; 0960X8; 0
DT 01-NOV-1991 (Rel.
DT 28-FEB-2003 (Rel.
DT 28-FEB-2003 (Rel.
DT 10-OCT-2003 (Rel.
DT 10-CT-2003 (Rel.
DT 2005 (Rel.
DT
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SEQUENCE FROM N.A.

Frankland J;

Frankland J;

Submitted (JUN-2001) to the EMBL/Ger
-!- FUNCTION: Reversible hydration c
saliva is unknown.
-!- CATALYTIC ACTIVITY: H(2)CO(3) =
-!- COFACTOR: Zinc (By similarity).
-!- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
CONFLICT
SEQUENCE
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CARBOHYD
CARBOHYD
CARBOHYD
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01-NOV-1991 (Rel. 20, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Carbonic anhydrase VI precursor (EC 4.2.1.1) (Carbonate dehydratase
VI) (CA-VI) (Secreted carbonic anhydrase) (Salivary carbonic
                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

MEDLINE=91105141; PubMed=1899030;

Aldred P., Fu P., Barrett G., Penschow J.D., 1

Aldred P., Fu P., Barrett G., Penschow J.D., 1

Coghlan J.P., Fernley R.T.;

"Human secreted carbonic anhydrase: cDNA clon:

sequence, and hybridization histochemistry.";

Biochemistry 30:569-575(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                     SEQUENCE FROM N.A. Grubb D.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SRLQLNFRATQPLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVFGLLFAVTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EELLPESPGEYYRYEGSLTTPPCYPTVLWTVFRNPVQISQEQLLALETALYFTHMDDPTP
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Pred. No. 2.1e-21;
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Best Local Sim
Matches 102;
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EMBL; AF128411; AAF22565.1; J
EMBL; AF128412; AAF22565.1; J
EMBL; AF128413; AAF22565.1; J
EMBL; AF128413; AAF22565.1; J
EMBL; AF128414; AAF22565.1; J
EMBL; AF128415; AAF22565.1; J
EMBL; AF128416; AAF22565.1; J
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SIGNAL
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InterPro; IPR001148; Euk COanhd.
Pfam; PF00194; carb_anhydrase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MIM;
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-!- SIMILARITY: Belongs family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProDom; PD000865; Euk_COanhd; 1.
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HNDYRRTOPLKHRVVESNFP
                                                                                                                         DISALLPSDESKYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSRL
                                                                                                                                                                 VHYNSKYKTYDIAQDAPDGLAVLAAFVEVKNYPENTYYSNFISHLANIKYPGQRTTLTGL
                                                                                                                                                                                                                                                    MVNNGHTVQIGLPSTMRMTVADGTVYIAQQMHFHWGGASSEISGSEHTVDGIRHVIEIHI
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                                                                                DVQDMLPRNLQHYYTYHGSLTTPPCT
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ZING (CATALYTIC) (B)
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ZING (CATALYTIC) (B)
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N-LINKED (GLCNAC:
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                                          391
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N-LINKED (GLCNAC...
N-S (IN GLCNAC...
T -> S (IN REF. 3).
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RESULT 11 CAH6_MOUSE ID CAH6_MOUSE

STANDARD;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN-CD-1, TISSUE-Salivary gland;
STRAIN-CD-1, TISSUE-Salivary gland;
MEDLINE-99077987, PubMed-9859573;
Sok J., Wang X.Z., Batchvarova N., Kuroda M.,
"CMOP-Dependent stress-inducible expression of
carbonic anhydrase VI.";
carbonic anhydrase VI.";
Mol. Cell. Biol. 19:495-504(1999).
                                                                                                                    DISULFID
CARBOHYD
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                Lyase;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=89246331; PubMed=2497732; Fernley R.T., Darling P., Aldred "Tissue and species distribution"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carbonic anhydrase VI
VI) (CA-VI) (Secreted
                                                                                                                                                                                                                                                    Pfam; PF00194; carb_anhydrase; ProDom; PD000865; Euk_COanhd; PROSITE; PS00162; EUK_CO2_ANHY
                                                                                                                                                                                                                                                                                                                  HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 18-38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                        MGD; MGI:1333786; Car6.
InterPro; IPR001148; Euk
                                                                                                                                                                                                                                                                                                                                        EMBL; AF079835; AAD12540.1;
                                                                                                                                                                                                                                                                                                                               PIR; S03863; S03863.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        isoenzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COFACTOR: Zinc (By similarity).
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Major consistuent of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: Reversible hydration saliva is unknown.
CATALYTIC ACTIVITY: H(2)CO(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: Belongs to the eukaryotic-type carbonic anhydrase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                family
                                               139
  194
                         19
                                                                                                                                                                                                                                                                                                                P00918;
                                                                        l Similarity
98; Conser
 RLRNNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGR----PGSEHTVEGHRFPAE
                                               SHWRYGGD-----PPWPRVSPACAGREQSPVDIRPQLAAFCPALRPLELLGFQLPPLPEL
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Rodentia;
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precursor (EC 4.2.1.1) (Carbonate dehydratase
carbonic anhydrase) (Salivary carbonic
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N-LINKED (GLCNAC.
H -> G (IN REF. 2
                                                                       Score 467.5;
Pred. No. 7.4e
15; Mismatches
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RT "Generation and initial analysis of more than 15,000 full-length RT human and mouse cDNA sequences.";

RC "CENTALYTIC ACTIVITY: H(2)CO(3) = CO(2) + H(2)O.

CC "CATALYTIC ACTIVITY: H(2)CO(3) = CO(2) + H(2)O.

CC "CATALYTIC Belongs to the eukaryotic-type carbonic anhydrase family.
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10-OCT-2003
10-OCT-2003
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STRAIN=C57BL/6; TISSUE=Kidney;
Hewett-Emmett D., Shimmin L.C.;
"Characterization and evolution of two new members of the carbonic anhydrase gene family in mouse: Carl3 and Carls submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.
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Mammalia; Eutheria; Rodentia;
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Strausberg R.L., Feingold E.A., Grouse L.
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                                                      ry is copyright. It is produced through Institute of Bioinformatics and the EN
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between the Swiss institute of Bioinformat the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.

There are no restrictions

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EMBL; BC019975; AAH19975
HSSP; Q64444; ZZNC.
MGD; MGI:1931324; Car15.
 Tribolodon hakonensis (Japanese dace). Eukaryota, Metazoa; Chordata; Craniata; Actinopterygii, Neopterygii; Teleostei; Cyprinidae; Tribolodon. NCBI_TaxID=151740;
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Pfam; PF00194; carb anhydrase; 1.
ProDom; PD00085; Euk COanhd; 1.
PROSITE; PS00162; EUK CO2 ANHYDRASE;
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SEQUENCE 2:
      "Sequence exclusive FEBS Lett. [2]
                                                                                                                                                                                                       CAHS MOUSE STANDARD; PRT; 290 AA.

P28651; Q8CF58; Q91XF6;
01-DEC-1992 (Rel. 42, Created)
10-OCT-2003 (Rel. 42, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Carbonic anhydrase-related protein (CARP) (CA-VIII)
CAS OR CARS OR CALS OR CARP.
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                                                                                SEQUENCE FROM N.A.
STRAIN=BALB/c; TISSUE=Brain;
MEDLINE=91032050; PubMed=2121526;
                                                                                                                                          Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; NCBI_TaxID=10090;
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Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus

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use by non-profit institutions as long modified and this statement is not remove entitles requires a license agreement (so or send an email to license@isb-sib.ch).
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-!- COFACTOR: Zinc (By similarity).
-!- SUBCELLULAR LOCATION: Cytoplasmic (By
-!- SIMILARITY: Belongs to the eukaryotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001148; Buk COanhd.
pfam; pf00194; carb_anhydrase; 1.
ProDom; PD000865; Buk COanhd; 1.
prOSITE; pS00162; EUK_CO2_ANHYDRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         s SWISS-PROT entry is copyright. It is produced through a colument the Swiss Institute of Bioinformatics and the EMBL ou European Bioinformatics Institute. There are no restriction by non-profit institutions as long as its content is illified and this statement is not removed. Usage by and for ities requires a license agreement (See http://www.isb-sib.ci
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                                                                                                         LDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGFGDSR
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ZINC (CATALYTIC) (B)
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RX MEDLINE=22386257; PubMed=12477932;

RX MEDLINE=22386257; PubMed=12477932;

RA Altschul S.F. Jeeberg B. Buetow K.H. Shenmen C.M. Schuler G.D.,

RA Altschul S.F. Jeeberg B. Buetow K.H. Shenmen C.M. Schuler G.D.,

RA Altschul S.F. Jeeberg B. Buetow K.H. Schaefer G.F. Bhat N.K.,

RA Altschul S.F. Jordan H. Moore T. Max S.I. Wang J. Hsieh F.,

RA Diatchenko L. Marusina K. Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Bownstein M.J. Usdin T.B., Toshiyuki S. Carminci P. Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Richards S., McDley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,

RA Rodriguez A.C., Schin J.E., Jones S.J.M., Marra M.A.,

"Generation and initial analysis of more than 15,000 full-length

RI muman and mouse cDNA sequences.",

Proc. Natl. Acad. Sci. U.S.A. 9916899-16903(2002).

C. -- FINSUE SPECIFICITY: EXPRESSED ONLY IN PURXINJE CELLS.

-- SIMILARITY: Belongs to the eukaryotic-type carbonic anhydrase

C. -- SIMILARITY: Belongs to the eukaryotic-type carbonic anhydrase
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Nature 420:563-573(2002).
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p35219;
01-FEB-1994 (Rel. 28, Create;
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16-CCT-2001 (Rel. 40, Last a;
Carbonic anhydrase-related p
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MEDILINE=93246562; PubMed=8482548;
Skaggs L.A., Bergenhem N.C.H., Vent
"The deduced amino acid sequence of
protein (CARP) is 98% identical to
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EMBL; AK004896; BAC25100.
EMBL; BC010773; AAH10773.
PIR; S12867; S12867.
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                 e 126:291-292(1993).
FUNCTION: Does not have a carbonic anhydrase catalytic activity.
SIMILARITY: Belongs to the eukaryotic-type carbonic anhydrase
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PR00194; carb_anhydrase; 1.
PS; PS00162; EUK_CO2_ANHYDRASE;
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ZINC (POTENTIAL).
EVR->QVH: RESTORE ZINC-BINDING AND ACTIVITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GO:0004089; F:carbonate dehydratase activity; TAS. InterPro; IPRO01148; Buk Coanhd. Pfam; PF00194; carb anhydrase; 1. Probom; PD000865; Euk Coanhd; 1.
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                                                                         172 G-KEHVGLKAVTEILODÍQYKGKSKTIPCFNPNTLLPDPLLRDYWVYEGSLTIPPCSEGV 230
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                                 341 IWTVFNQTVMLSAKQL-----HTLSDTLWGPGDSRLQLNFRATQPLNGRVIEASF 390
                                                                                                            282 GPEENSAYEQLLSRLEEIAEEGSETQVPGLDISALLPSDFSR-YFQYEGSLTTPPCAQGV 340
231 TWILFRYPLTISQLQIEEFRRLRTHVKGAELVEGCDGILGDNFRPTQPLSDRVIRAAF 288
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35 GLU-RICH (ACIDIC).
115 ANCESTRAL ZINC LIGAND.
117 ZINC (POTENTIAL).
140 ZINC (POTENTIAL).
32842 NW; BA6BB5A932A324EE CRC64;
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Result
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GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
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/ 137 DQSHWRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRLR 196	Query Match 21.2%; Score 515; DB 6; Length 320; Best Local Similarity 41.6%; Pred. No. 2.4e-30; Matches 107; Conservative 43; Mismatches 95; Indels 12; Gaps 4;		<pre>PROSITE; PS00162; EUK_CO2_ANYXDRASE; 1.</pre>			C GO; GO: 0004089; r:carbonate denydiacase activity; ibw. GO; GO:0008270; F:zinc ion binding; IEA.	EMBL; AB080972; BAC65098.1;	Submitted (MAR-2002) to the EM		Murakami M.:			NCBI TaxID=9615;	Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;		CA6.		01-OCT-2003 (TrEMBLrel. 25, Last	01-JUN-2003 (TrEMBLrel. 24,	01-JUN-2003 (TrEMBLrel.		SULT 1

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Strausberg R.;
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; BC031385; AAH31385_1; -
MGD; MGI:1923709; Z310047E01Rik.
GG; GG:0004089; F:carbonate dehydratase activity; IEA.
GG; GG:0008270; F:zinc ion binding; IEA.
GG; GG:0008270; P:one-carbon compound metabolism; IEA.
Pfam; PF00194; Carb anhydrase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00194; carb_anhydrase; 1.
ProDom; PD000865; Euk COanhd; 1.
PROSITE; P$00162; EUK CO2_ANHYDRASE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypothetical protein SEQUENCE 344 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypothetical | 2310047E01RIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-OCT-2002
01-OCT-2003
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                                                                                                                                                                                           EBLLPESPGEYYRYEGSLTTPPCYPTVLWTVFRNPVQISQEQLLALETALYFTHMDDPTP
                                                                                                                                                                                                                                                                                                                                                L-STAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQVPGLDI
VSIWLFKRKKSKKGDNKGVIYKPA
                                            VAFLVQMRRQHRRGTKGGVSYRPA 452
                                                                                                                                                                                                                                       SALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLW-----GPGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SHWRY---GGDPPWPRVSPACAGREQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRL
                                                                                                REMINNFRQVQKFDERLVYISFRQGIILSV-
                                                                                                                                               SRIQINFRATQPINGRVIEASFPAGVDSSPRAAEPVQINSCLAAGDILAIVFGLLFAVTS
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                                                                                                                                                                                                                                                                                              YNSDLYPDFSTÅSDKSEGLAVLAVLIEIG-SANPSYDKIFSHLOHVKYKGOOVLIPGFNI
                                                                                                                                                                                                                                                                                                                                                                                                          TNDGHSVRLNLNSDMYIQGLQPHHYRAEQLHLHWGNRNDPHGSEHTVSGKHPAAELHIVH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       344 AA;
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(TrEMBLrel. 22,
(TrEMBLrel. 25,
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Pred. No. 1.2e-
50; Mismatches
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Last annotation updat
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1.2e-28;
nes 131;
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RA Klausner R.D., Collins F.S., Wagner L., Schaefer C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetcow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.R.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.R.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Uddin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Bosak S.A., McDwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Altsymliski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA Jones S.T. Mayra M.A.
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Best Local Similarity

Matches 98; Conser
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01-007-2003 (Trembute...
Hypothetical protein.
Hypothetical (Mouse).
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SIRAIN=FVB/N; TISSUE=Salivary gland;
MEDLINE=22388257; PubMed=12477932;
MEDLINE=22388257; PubMed=12477932;
MEDLINE=22388257; PubMed=12477932;
MEDLINE=23388257; PubMed=1247793;
MEDLINE=23388257; PubMed=12477932;
MEDLINE=23388257; PubMed=1247787;
MEDLINE=23388257; PubMed=1247787;
MEDLINE=23388257; PubMed=1247787;
MEDLINE=233887; PubMed=1247787;
ME
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01-OCT-2003
01-OCT-2003
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STRAIN=FVB/N; TISSUE=Salivary gland;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q7TNG9
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                                                                                                                                                                                                                                                                                                                                AHFVHFNKEYGTYENAKDQKNGLAVLAVLFKIDEYAENTYYSDIISALKNIEKPGETTTL
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NTIONGYRSTOPNNHRVVEANF
                                                                                      SRLOLNFRATOPLNGRVIEASF
                                                                                                                                                                                                                                             PGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGD
                                                                                                                                                                                                                                                                                                                                                                                                                  IHVVHLSTAFARVDEALGREGGLAVLAA-FLEEGFEENSAYEQLLSRLEEIAEEGSETQV
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                                                                                                                                                                    KDTTIRNILPKDVHHYYTYPGSLTTPPCTENVQWFVLRDKVTLSKAQVVTIENSVMDHNN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19.2%; Score 465.5; DB 11; Length 37.4%; Pred. No. 1.2e-26; tive 44; Mismatches 107; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U.S.A. 99:16899-16903 (2002)
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                                                                                                                                                                                                                                                                                              Hypothetical protein.

Xenopus laevis (African clawed frog).

Eukaryota; Metazoa; Chordata; Craniata; Ve:

Amphibia; Batrachia; Anura; Mesobatrachia;

Xenopodinae; Xenopus.

NCBI_TaxID=8355;
                                                                                                     Richardson P.;
                                                                                                                                      MEDLINE=22341132;
Klein S.L., Straus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (MAR-2003) to the EMBL/GenBank/DDBJ data EMBL; BC049973; AAH49973.1; -.
GO; GO:0004089; F:carbonate dehydratase activity; GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0008730; P:one-carbon compound metabolism; InterPro; IPR001148; Buk COanhd.
Pfam; PF00194; carb anhydrase; 1.
PYCODOM; PD000855; Euk_COanhd; 1.
                                "Genetic and genomic initiative.";
                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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01-OCT-2003 (TrEMBLrel. 25, Last annotation updat
Similar to carbonic anhydrase 6 (Fragment).
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STRAIN-FVB/N; TISSUE-Salivary gland;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RA Strausberg R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., a Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., a Altschul S.F., Zeeberg B., Buecow K.H., Schaefer C.F., Bhat N.K., a Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., a Hopkins R.F., Jordan H., Moore T., Rubin G.M., Hong L., a Hopkins R.F., Jordan H., Moore T., Rubin G.M., Hong L., a Hopkins R.F., Jordan R., Farmer A.A., Rubin G.M., Hong L., a Hopkins R.F., Jordan R., Toshiyuki S., Carminci P., Prange C., a Brownstein M.J., Uddin T.B., Toshiyuki S., Carminci P., Prange C., a Brownstein M.J., Walki T.B., Toshiyuki S., Carminci P., Prange C., a Brownstein M.J., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., a Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., a Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., a Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., a Hillard S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Nuzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Willalon D.K., Willalon E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., a Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., a Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., a Jones S.J. Mayrya M.A.
                                                                                                                    Q811X4 PRELIMINARY;
Q811X4;
Q811X4;
Q1-JUN-2003 (TIEMBLIFE: 24, L
Q1-CCT-2003 (TIEMBLIFE: 25, L
Q1-CCT-2003 (TIEMBLIFE: 25, L
Carbonic anhydrase 7.
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [2]
SEQUENCE FROM N.A.
TISSUE=Whole;
TIR=22388257;
  SEQUENCE Chen Y.,
                                                                             Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Klein S., Strausberg R.;
Submitted (JUN-2003) to the
EMBL; BC054242; AAH54242.1;
Hypotherical protein.
SEQUENCE 312 AA; 34942 MV
                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jones S.J., Marra M.A.;
Jones S.J., Marra M.A.;
"Generation and initial analysis of more than 15,000 and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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                   FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QSHWRYG-----GDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLELLGFQLP
                                                                                                                                                                                                                                                                                                                                             NSLNFTENORMVENERPVORLGDRTVYISSSQAILSSERS
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                                                                                                                                                                                                                                                                                                                                                                                                                                             GSETQVPGLDISALLP--SDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AEIHVVHLSTAFARVDEALGRPGG-----LAVLAAFLEEGPEENSAYEQLLSRLEEIAEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIRQLNVTNNGHSAQVDLPPGIEISGGGLSGTYDAIQFHFHWGSEEFPGSEHTIDGEKYP
                                                                                                                                                                                                                                                                                                                                                                                                                        GAVKNE-SANLTKLI PDKEELKVYYRYNGSLTTPPCNETVTWTLFNTTIKLSQQQLRAFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PLPELRIRNNGHSVOLTLPPGLEMALGP-GREYRALQLHLHWGAAGRPGSEHTVEGHRFP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EGHWCYEIQACQDPGCGPRFWNNANTFCGEKEQSPINILTKKAVFMESLKEFDLKSYGV-
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nilarity 35.4%;
Conservative 49
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                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                   Created)
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Pred. No. 4.6e-24;
9; Mismatches 107
                                                                           Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DBC9629136044CF1 CRC64;
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Best Local S
Matches 95
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Best Local S
Matches 101
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Submitted (JAN-2002) to the EMBL/GenBank
EMBL; AY075021; AALT8169.1;
GO; GO:0004089; F:carbonate dehydratase
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006730; P:one-carbon compound me
                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

ESBAUGH A.J., Lund S.G., Tufts B.L.;

ESBAUGH A.J., Lund S.G., Tufts B.L.;

ESBAUGH A.J., Lund S.G., Tufts B.L.;

"The Evolution of Red Blood Cell Carbonic Anhydrase: Properties

CA in a Teleost Fish, Oncorhynchus mykiss.";

Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.

EMBL; AY307082; AAP73748.1;

EMBL; AY307082; AAP73748.1;

EMBL; AY307082; AAP73748.1;

EMBL; AY307082; AAP73748.1;

Tenert 260 AA; 28613 MW; 5CC928B72B922A52 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-2003 (TrEMBLrel. 25, Created)
01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Erythrocyte carbonic anhydrase.
Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI TaxID=8022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Interpro; IPR001148; Euk_COanhd.
Pfam; PF00194; carb anhydrase; 1.
ProDom; PB000865; Euk_COanhd; 1.
PROSITE; PS00162; EUK_CO2 ANHYDRASE; 1.
SEQUENCE 264 AA; 29915 WW; B58E0E20CB840FA5
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hes 101;
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                                                                                                                                                                                                                                                                                                                   Similarity
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HVVHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQVPG
                                                      ILNNGHSFQVGFVDDVDSSTLTGGPITGIYRLKQFHFHWGASDDRGSEHTVNGIKFPCEL
                                                                                                            LRNNGHSVOLTLPPGLEMALGPGRE----YRALQLHLHWGAAGRPGSEHTVEGHRFPAEI
                                                                                                                                                                  SHSWGYGPSDGPEKWCDGFPVANGPRQSPIDIIPGQTSYDSTLKPLKL---KYDPSNSTD
                                                                                                                                                                                                                                    SH-WRYG---
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                                                                                                                                                                                                                                                                                       Conservative
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llarity 37.5%;
Conservative 4
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                                                                                                                                                                                                                        GDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELR
                                                                                                                                                                                                                                                                                                             16.4%;
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                                                                                                                                                                                                                                                                              Score 397; DB 13;
Pred. No. 1.1e-21;
8; Mismatches 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dehydratase activity; pinding; IEA.
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Pred. No. 1.5e-22;
1; Mismatches 99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260
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RESULT
Q865Y7
ID Q8
AC Q8
DT 01
DT 01
DT 01
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Q7ZUE2
ID Q7
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Best Local S
Matches 98
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EMBL; BC043309; AAH43309.1.

GO; GO:0004089; F:carbonate dehydratase activity; IE

GO; GO:0004087; F:zinc ion binding; IEA.

GO; GO:0006730; F:cone-carbon compound metabolism; IE

Interpro; IPR001148; Euk_Coanhd.

Pfam; PF00194; carb anhydrase; 1.

PTODOM; PD000865; Euk_COanhd; 1.

PROSITE; PS00162; EUK_CO2_ANHYDRASE; 1.

PROSITE; PS00162; EUK_CO2_ANHYDRASE; 1.

PROSITE; PS00162; EUK_CO2_ANHYDRASE; 1.
Q865Y7;
Q865Y7;
01-JUN-2003
01-JUN-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-UN-2003 (TEMBLrel. 24, Created)
01-UN-2003 (TEMBLrel. 24, Last sequence upda
01-OCT-2003 (TEMBLrel. 25, Last annotation up
Similar to carbonic anhydrase VII (Fragment)
Brachydanio rerio (Zebrafish) (Danio rerio).
Eukaryota; Metazoa; Chordata; Craniata; Verth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q7ZUE2
Q7ZUE2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Actinopterygii; Neopterygii; Teleostei; Ostariophysi;
Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Body;
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                                                                                                                  283
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                                                                                                                                                                                                                                                                                                                                                                           ; 86
                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                  NPKCLLPNSL-EYWTYPGSLTTPPLYESVTWIVLKEPIYVSEKOMGKFRTLLFNGEEEED
                                                                                                                                                                                         DISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGD---
                                                                                                                                                                                                                                                                                           NNGHSVQLTLEPGLEMAL---GP-GREYRALQLHLHWGAAGRPGSEHTVEGHRFPAEIHV
                                                                                                                  RNRMENNYRPPQPLKGRMVRASF
                                                                                                                                    -SRLQLNFRATQPLNGRVIEASF
                                                                                                                                                                                                                      VHWNANKYKSFSEAAVAPDGLAVLGIFLETG
                                                                                                                                                                                                                                         VHL-STAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQVPGL
                                                                                                                                                                                                                                                                     NNGHSVVVEFVDTDERSVITGGPLENMYRLKQFHFHWGSKGCCGSEHTVAGKTFVSELHL
                                                                                                                                                                                                                                                                                                                      HWGYGEDNGPSAWHKDYPIAEGNRQSPIDIVPSEAVFDAKLSPIAL---SYNNCTSLSIS
                                                                                                                                                                                                                                                                                                                                               HWRYG---GDPPWPRVSPACAGREQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FDAKTLLPCSLD-YWTYDGSLTTPPLLESVTWIVLKEPISVSPTQMGKFRSLMFSGDGEA
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(TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                           Conservative
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 224,
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Created)
Last sequ
Last anno
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Pred. No. 1.5e
35; Mismatches
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                                                                                                                                                                                                                    -DEHRALHQITDALYMVRFKGSLAEFKGF
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Best Local S
Matches 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Daigle R., Castro I., Desrochers M., Charest P.-M.
Daigle R., Castro I., Desrochers M., Charest P.-M.
Full length cDNA of Bovine Carbonic Anhydrase II.
Submitted (FEB-2003) to the EMBL/GenBank/DDBJ data
EMBL; AY240220; AA085140.1; -
GO; GO:0004089; F:carbonate dehydratase activity;
R GO; GO:000629; F:lyase activity; IEA.
GO; GO:0008270; F:cainc ion binding; IEA.
GO; GO:0006730; P:one-carbon compound metabolism;
R GO; GO:0006730; P:one-carbon compound metabolism;
                                                                                                                                                                                                                                                                 Q7TPE1; PRELIMINARY;
Q7TPE1;
01-OCT-2003 (TrEMBLrel. 2
01-OCT-2003 (TrEMBLrel. 2
01-OCT-2003 (TrEMBLrel. 2
         SEQUENCE FROM N.A.

STRAIN=FVB/N, TISSUE=Colon;

MEDININE=22388257; PubMed=12477932;

MEDININE=22388257; PubMed=12477932;

Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heish F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Brownstein M.J., Usdin T.B., Peters G.J., Abramson R.D., Mullahy S.J.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
                                                                                                                                                                                                                                        Hypothetical protein. Mus musculus (Mouse).
                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lyase.
SEQUENCE
                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Carbonic anhydrase ...

Bos taurus (Bovine).

Bukaryota; Metazoa; Chordata; Craniat

Bukaryota; Futheria; Cetartiodactyla;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001148; Euk COanhd.

Pfam; PF00194; carb_anhydrase; 1.

ProDom; PD000865; Euk COanhd; 1.

PROSITE; PS00162; EUK_CO2_ANHYDRASE; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LMLANWRPAQPLKNRQVR-GFP
                                                                                                                                                                                                                                                                                                                                                                                                                                     RLQLNFRATQPLNGRVIEASFP 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PGSLLPNVLD-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VHWNTKYGDFGTAAQQPDGLAVVGVFLKVG-DANPALQKVLDALDSIKTKGKSTDFPNFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VHUSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQVPGLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NNGHSFNVEYDDSQDKAVLKDGPLTGTYRLVQFHFHWGSSDDQGSEHTVDRKKYAAELHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NNGHSVQLTLPPGLEMAL---GP-GREYRALQLHLHWGAAGRPGSEHTVEGHRPPAEIHV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HWGYGKHNGPEHWHKDFPIANGERQSPVDIDTKAVVQDPALKPLALV---YGEATSRRMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HWRYG---GDPPWPRVSPACAGREQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                              - YWTYPGŚLTTPPLLESYTWIYLKEPISVŚSQQMLKFRTLNFNAEGEPEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29114 MW;
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                                                                                                                                                                                                                                                                     222
55,
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                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                   Created)
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Pred. No. 1.
                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                 PRT;
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actyla; Ruminantia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vertebrata; Euteleostomi;
minantia; Pecora; Bovoidea;
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يە C.,
ئىر S.J.,
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SEQUENCE.

TISSUE=Embryo;

Klein S., Strausberg R.;

klein S., Strausberg R.;

L Submitted (DEC-2002) to the EMBL/GenBank/I

R EMBL; BC041213; AAH41213.1; .

RG) GO:0004089; F:carbonate dehydratase a

DR GO; GO:0008270; F:zinc ion binding; IEA.

DR GO; GO:0006730; P:one-carbon compound me

DR InterPro; IPR001148; Euk Coanhd.

DR Pfam; PP00194; carb anhydrase; 1.

DR Pfam; PD000865; Euk COanhd; 1.

DR ProDDom; PD000865; Euk COanhd; 1.
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Best Local S
Matches 93
                                                                                                                                                                                                                            Q7ZYU6 PRELIMINARY; PRT; 260 AA.
Q7ZYU6;
01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Similar to carbonic anhydrase II.
Xenopus laevis (African clawed frog).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrat
Amphiba; Batrachia; Anura; Mesobatrachia; Pipoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; BC055291; AAH55291.1;
Hypothetical protein.
SEQUENCE 260 AA; 29041 MW
                                                                                                                                                                                                      NCBI_TaxID=8355
                                                                                                                                                                                                                      Xenopodinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H. Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S. Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez Milting M., Madan A., Young A.C., Shevchanko Y., Boiffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Balkesley R.W., Touchman J.W., Green E.D., Dickson M.C., Kataka U., Schmutz J., Myers R.M., Butterfield Y. Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strausberg k.;
Strausberg k.;
Strausberg k.;
AUL-2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Proc. Natl. Acad. [2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=FVB/N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and mouse cDNA sequences."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jones S.J., Marra M.A.; "Generation and initial analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                           AMVDNWRPAQPLKNRKIKASF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQL---HTLSDTLWGPGDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HWRY----GGDPPWPRVSPACAGREQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                     RLOLNFRATOPLNGRVIEASF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCSLLPGNLD-YWTYPGSLTTPPLLECVTWIVLREPITVSSEQMSHFRTLNFNEEGDAEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VHWNTKYGDFGKAVQQPDGLAVLGIFLKIGP-ASQGLQKVLEALHSIKTKGKRAAFANFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQVPGLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NNGHSFNVEFDDSQDNAVLKGGPLSDSYRLIQFHFHWGSSDGQGSEHTVNKKKYAAELHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HWGYSKHNGPENWHKDFFIANGDRQSPVDIDTATAHHDPALQFL-LISYD--KAASKSIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NNGHSVQLTLPPGLEMAL - - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FROM
                                                                                                                                                                                                                      Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N.A.
TISSUE=Colon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sci. U.S.A.
                                                                                                                                  to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29041 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 380.5;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GP-GREYRALQLHLHWGAAGRPGSEHTVEGHRFPAEIHV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99:16899-16903(2002)
                  ACA02D0D0D818F2C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     390
                                                                                                                                                                                                                                                                                                                                                                                                                           259
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of more than 15,000
                                                                                                                                                                                                                               Vertebrata; Euteleostomi; ia; Pipoidea; Pipidae;
                                                                                                     activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .9e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                112;
                                                                                                                                                                                                                                                                                         update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                                          IEA
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Query Match Best Local S Matches 90

Similarity

DB 13;

Length

90;

Conservative

141

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Lund S.G., Dyment P., Gervais M.R., Moyes C.D., Tufts E "Characterization of erythrocyte carbonic anhydrase in fish, the longnose gar (Lepisosteus osseus).",
J. Comp. Physiol. B. Biochem. Syst. Environ. Physiol. Cembr., AV125007; AAM94169.1; -...
GO; GO:0004089; F:carbonate dehydratase activity; IEA. GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0008270; P:zinc ion binding; IEA.
InterPro; IPR001148; Euk Coanhd.
Pfam; PF00162; Garb anhydrase; 1.
PROSITE; PS00162; EUK COanhd; 1.
PROSITE; PS00162; EUK CO2 ANHYDRASE; 1.
SEQUENCE 261 AA; 28700 MW; 55BDBF4A08D9F54B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Erythrocyte carbonic anhydrase.
Lepisosteus osseus (Long-nosed gar).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Actinopterygii, Neopterygii, Semionotiformes, Lepisosteidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                198 NGHSVQLTLPPGLEMALGPG----REYRALQLHLHWGAAGRPGSEHTVEGHRFPAEIHVV
                                                                  GLDISALLPSDFSRYFQYEGSLTTPPCAQGYIWTYFNQTVMLSAKQLHTLSDTLW-GPGD 368
                                                                                                                                                                                                HVVHLSTA-FARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQVP
                                                                                                                                                                                                                                                                                  ILNNGHSFÖVDFADENDSSTLOGGFISGVYRLROFHFHNGASDERGSEHTVGGVKYAAEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SH-MRY----GGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELR
       QFDPKILLPSSLD-FWTYEGSLTTPPLLESVTWIVLKEPITVSSEQMAKFRSLLFTAEGE
                                                                                                                                                                                                                                                                                                                                                                                                                    SHSWGYAANNGPDKWHEKFPIAQGPRQSPIDIVPSQAQHDPDLKPLRIV---YDPSTSKG
                                                                                                                                         HLVHWNAGKYASFGDAAKAPDGLAVVGVFLKIGAASPN-LQKVLDALDAIKTKGKQTPFP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HISTAFARVDEALGREGGLAVLAAFLEEGFEENSAYEQLLSRLEETAEEGSETQVPGLDI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SALLPSDFSRYFQYEGSLTTPPCAQGYIWTVFNQTVMLSAKQLHTLSDTLW-GPGDSRLQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15.7%; Score 379.5; DB 13; 34.6%; Pred. No. 2.3e-20; tive 43; Mismatches 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 379.5; D
Pred. No. 2.3e-
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55BDBF4A08D9F54B CRC64;
                                                                                                                                                                                                                                                                                                                                  -GP-GREYRALQLHLHWGAAGRPGSEHTVEGHRFPAEI 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         261
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       236
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Q8MPH8
       ROCCOS GENERAL DE LA COMPANIA DE LA 
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ID QBAVG
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Best Local S
Matches 91
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L Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.

R EMBL, BC042287; AAH42287.1;

R GO; GO:0004089; F:carbonate dehydratase activity; IEA.

R GO; GO:000670; F:zinc ion binding; IEA.

R GO; GO:0006730; F:corbonate compound metabolism; IEA.

R GO; GO:0006730; P:corbonate.

R GO; GO:0006730; P:corbonate.

R GO; GO:0006730; P:corbonate.

R Foolom; PF001148; Euk COanhd.

R Pfam; PF00194; carb anhydrase; 1.

R PFCDOm; PD001065; Euk COanhd; 1.

R PFCDOm; PD001065; Euk COanhd; 1.

R PFCDOm; PD001062; EUK COANHYDRASE; 1.

SEQUENCE 260 AA; 25004 MW; 2C7B5C0772C0C2DA CRC64;
                                                                                                                                                                                                                                         Q8MPH8;
01-OCT-2002
01-OCT-2002
01-OCT-2003
CA1.

Riftia pachyptila (Tube worm).

Rufaryota; Metazoa; Pogonophora;

Riftiida; Riftiidae; Riftia.

NCBI_TaxID=6426;

[1]
                                                                                                                                                                                                        Carbonic anhydrase
                                                                                                                                                                                                                                                                                                                                                                               ОВМРНВ
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Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Kenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-0CT-2003 (TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8AVG8;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=8355;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141 WRYG---GDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRLRN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      369
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MVDNFRPTQPLKGRHIRASF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L--NFRATOPLNGRVIEASF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SVLLPKSLD-FWTYKGSLTTPPLLQCVMWHVLKEPITVSNQQLTQLRSLFFNABGDTPCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLW-GPGDSRLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIAEEGSETQVPGLDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NGHAFNVEFDDSENKSVLTGGALTEPYRLKOFHFHWGSCDGHGSEHTVNGVKYEAELHLV 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NGHSVQLTLPPGLEMALGPG----REYRALQLHLHWGAAGRPGSEHTVEGHRFPAEIHVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WGYGPDNGPSTWHHAFPLAKGEYQSPINIVTAEAKHDHHLKPISI---KYDPSTTKVILN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HWNTKYGSMAEAVKHCDGLAVVGVFLKVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACCMVDNYRPPOPLKGRKVRASF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SRLOL -- NFRATOPLNGRVIEASF
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3 (TrEMBLrel. 2 )
                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15.6%; Sc
35.0%; Pr
tive 41;
                                                                                                                                                                       . 22, Created)
. 22, Last sequence update)
. 25, Last annotation update)
4.2.1.1).
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Pred. No. 3.2e
41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      259
                                                                                            Vestimentifera; Axonobranchia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  390
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SEQUENCE FROM N.A. Lund S.G., Dyment NCBI_TaxID=34771; RESULT 12 Q8JG56

08JG56;

PRELIMINARY;

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240 373

MVDNFRPAQPLKGRDVRASF 259 L--NFRATQPINGRVIEASF 390 122

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LRNNGHSVQLTLPPGLEMAL - - -

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Best Loc Matches

Local

Similarity

15.7%;

Conservative

40;

139

Query Match

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RESULT

Q811ER

ID 11ER

AC Q8

AC Q8
                                                                                                                                 SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

C STRAIN-FVB/N; TISSUE-Salivary gland;

Strausberg R.;

Strausberg R.;

Strausberg R.;

Strausberg R.;

Strausberg R.;

Strausberg R.;

EMBL; BC04495; AAH46495.1;

DR G0:000489; F:carbonate dehydratase activity; IEA.

DR G0; G0:0008270; F:zinc ion binding; IEA.

DR G0; G0:0006730; F:znc-carbon compound metabolism; IEA.

DR G0; G0:0006730; P:one-carbon compound metabolism; IEA.

DR InterPro; ITR001148; Euk COanhd.

DR Pfam; PF00194; carb_anhydrase; 1.

TOPONOM; PD000865; Euk_COanhd; 1.
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        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 90; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q811E8;
01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-JCT-2003 (TrEMBLrel. 25, Last annotation update)
Similar to carbonic anhydrase 6 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lyase.
SEQUENCE
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Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     811E8
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De Clan M.C., Bailly X., Boulben S., Strub J.M., Von Dorssalaer A.,
Lallier F.H.;
Lallier F.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141 WRYGGDPP--WPRVSPACAGREQSPVDIRPQLAAFCPALRPLELLGFQLPPLPELRLRNN 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RATQPLNGRVIEASF 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RPTLGLCGRQVSSSF 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLPGDQSKYWYYPGSLTTPPCFESVTWIVYKDPIQLCENQLAALRKI-----TGCNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLPSDFSRYFQYBGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLSDTLWGPGDSRLQLNF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GLSFQVSVDGTL--SGGPLGNEYKAASFHFHWSKTSAEGSEHTVAGKAYAAEAHIVHYNA 117
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25661 MW; AAA53B407A1F4645 CRC64;
        15.2%;
38.2%;
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35.3%; Pred. No. 4.6e-20;
tive 36; Mismatches 109; Indels
Score 368.5; DB 11; Length 251; Pred. No. 1.4e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                        17F966486FB4261D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                251 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 5; Length 243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20;
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 188
                        367
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                                                                                                                                                                           192 ELRLRNNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGR----PGSEHTVEGHRFP
                                                                                                     8
                                                                                                                                                       10
                                                                                                                                                                                                        78;
                                                                                                 MEAHFVHFNKEYGTYENAKDQKNGLAVLAVLFKIDEYAENTYYSDIISALKNIEKPGETT
 NNNTIQNGYRSTOPNNHRVVEANF
                                                             QVPGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVENQTVMLSAKQLHTLSDTLWGP
                                                                                                                           AEIHVVHLSTAFARVDEALGRPGGLAVLAA-FLEEGPEENSAYEQLLSRLEEIAEEGSET
                                                                                                                                                 EFTMTNNGHTVSIDLPPSMYLETSDGTBFISKAFHFHWG--GRDWELSGSBHTIDGIRSI
                        GDSRLQLNFRATQPLNGRVIEASF 390
                                                 TLKDTTIRNLLPKDVHHYYTYPGSLTTPPCTENVQWFVLRDKVTLSKAQVVTIENSVMDH 187
                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                        34; Mismatches
211
                                                                                                                                                                                                       85;
                                                                                                                                                                                                       Indels
                                                                                                                                                                                                  7;
                                                                                                                                                                                                     Gaps
                                                                        366
                                                                                                 127
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Search completed: March 5, 2004, 09:06:30 Job time: 48 secs

ß 밁 8 Query Match Best Local Sim Matches 459; Gene: MaTuhN ;Superfamily: carbonic anhydrase homology ;141-390/Domain: carbonic anhydrase homology <CAH> Status: preliminary; translated from GB/EMBL/DDBJ
Molecule type: mRNA
Residues: 1-459 <RES>
Cross-references: EMBL:X66839; NID:g1000701; PIDN:CAA47315.1; PID:g1000702 Genetics: Pastorek, J.; Pastorekova, S.; Callebaut, I.; Mornon, J.; Zelnik, V.; Opavsky, R.; Zat cogene 9, 2877-2888, 1994
Title: Cloning and characterization of MN, a human tumor-associated protein with a don Reference number: I38013; MUID:94366734; PMID:8084592 Species: Homo sapiens (man)
Date: 17-May-1996 #sequence_revision 17-May-1996 #text_change 05-Nov-1999 ccession: I38013 421 421 361 361 301 301 241 241 181 181 121 121 DPQBPQNNAHRDKEGDDQSHWRYGGDPPWPRVSPACAGRFQSPVDIRDQLAAPCPALRPL 180 19 Similarity GLLFAVTSVAFLVOMEROHERGTKOGVSYRPAEVAETGA 459 DTLWGPGDSRLQLNFRATQPLNGRVIEASFPAGVDSSPRAAEPVQLNSCLAAGDILALVF EEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAKQLHTLS BEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCAQGVIWTVFNQTVMLSAXQLHTLS VEGHRFPAEIHVVHLSTAFARVDEALGRPGGLAVLAAFLEEGPEENSAYEQLLSRLEEIA VEGHREPAEIHVVHLSTAFARVDEALGREGGLAVLAAFLEEGPEENSAYEQLLSRLEEIA 300 ELLGFQLPPLPELRIRNNGHSVQLTLPPGLEMALGPGREYRALQLHLHWGAAGRPGSEHT 240 ELLGFQLPFLFELRLWNGHSVQLTLPFGLEMALGPGREYRALQLHLHWGAAGRPGSEHT 240 DPQEPQNNAHRDKEGDDQSHWRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPL 180 GEEDLPSEEDSPREEDPPGEEDLPGEEDLPGEEDLPEVKPKSEEEGSLKLEDLPTVEAPG 120 GEEDLPSEEDSPREEDPPGEEDLPGEEDLPGEEDLPEVKPKSEEEGSLKLEDLPTVEAPG 120 MAPICESPWIFILIPAPAPGLTVQLLLSLLLLMPVHPQRLPRMQEDSPLGGGSSGEDDFL 60 MAPLCPSPWIPILIPAPAPGITVQLILISULLIMPVHPQRLPRMQEDSPLGGGSSGEDDPL Conservative 100.0%; Score 2424; DB 2; 100.0%; Pred. No. 4.1e-147; vative 0; Mismatches 0; Length Indels 0 Gaps 420 420 360 360 300 60